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**Equity Research Report:
Orange SA**

Master 's Project

Master 's in Management
Specialization in General Management

Supervised by

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Equity Research Report: Orange SA

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Resumo

Este Relatório de Equity Research é o resultado do Projeto final de Mestrado realizado no âmbito do Mestrado em Gestão (Especialização Financeira) da Universidade do Minho. Este consiste na estimação do valor das ações de uma empresa cotada, neste caso, sobre a Orange SA, uma multinacional francesa na indústria de Telecomunicações. O resultado deste Relatório é uma recomendação de compra das ações da Orange, com preço alvo de 11.96 €, o que representa um potencial de valorização de 12.87% relativamente ao preço atual (09 Março 2024) de 10.60 €. A estrutura do Relatório é baseada nas diretrizes recomendadas pelo CFA Institute.

O primeiro capítulo inclui o sumário do Relatório, onde está explícita a recomendação de investimento. Em seguida, é sucintamente descrita a história da empresa, complementada posteriormente no 3º Capítulo com a descrição geral daquilo que é o negócio core da Orange. O 4º Capítulo engloba todos os pontos de referência da posição competitiva, nos quais são mencionados todos os pontos chave e diferenciadores face aos peers, explicando o modelo de negócio da empresa, o processo de criação de valor e uma lista dos serviços que oferece. De seguida, uma lista de pontos-chave relativos à empresa e, fundamentalmente, à indústria das telecomunicações, anunciando aquilo que demonstrou nos últimos anos e o que poderá vir a ser a mesma num futuro próximo. Posteriormente, é elaborada uma análise ao desempenho da empresa, e ao dos seus pares, relativo à sustentabilidade ambiental, responsabilidade social e ética corporativa (ESG). O capítulo seguinte relata o estudo dos relatórios financeiros passados, bem como a estimação do desempenho futuro. Ainda neste capítulo é feita uma comparação através do uso de rácios financeiros entre a Orange e as empresas pares. Estas análises convergem para a "Avaliação", na qual os Fluxos de Caixa Futuros são estimados. Juntamente com métricas de desempenho futuro da empresa e informações sobre os mercados financeiros, esses elementos são empregados para determinar o valor intrínseco da empresa e, consequentemente, o seu Capital Próprio. Simultaneamente, realiza-se uma avaliação do Capital Próprio utilizando múltiplos calculados a partir dos índices financeiros. Segue-se uma análise detalhada das premissas utilizadas na estimativa do valor do Capital Próprio, que é construída através do estudo da flutuação percentual de variáveis-chave e dos seus impactos no valor das ações em resposta a essas oscilações. O Relatório finaliza com a descrição minuciosa dos possíveis riscos que a empresa pode enfrentar, destacando o impacto provável desses desafios e como essas contingências podem-se refletir no valor do Capital Próprio.

Concluindo, o Equity Research Report descreve amplamente o modelo de negócio da Orange e o plano estratégico sobre a qual está assente. De relevar a importante faceta que a indústria das telecomunicações tem vindo a desempenhar nos últimos anos no espetro global, e que tenderá a acentuar-se cada vez mais a curto-médio prazo. Perante todos estes fatores e face a toda a conjuntura económica na qual está inserida, fazem da Orange uma boa oportunidade de investimento.

Palavras-Chave: Análise de Pares, Análise de Sensibilidade, Avaliação de Empresas, Capital Próprio, ESG, Fluxos de Caixa Futuros, Orange, Mercados Financeiros, Recomendação de Investimento, Telecomunicações, Avaliação.

Abstract

This Equity Research Report is the result of the Master's final Project carried out within the scope of the Master in Management (Specialization In Finance) program at the University of Minho. It consists of an evaluation of the Equity of a public company, in this case, on Orange SA, a French multinational in the Telecommunications industry. The outcome of this Report is a Buy recommendation for Orange shares, with a target price of 11.96 €, which represents an upside potential of 12.87% relative to the current price (as of March 09) of 10.60€. The Report's structure is based on the guidelines recommended by the CFA Institute.

The first chapter includes a summary of the report, explicitly stating the investment recommendation. Subsequently, the company's history is briefly described, further complemented in the 3rd chapter with an overview of Orange's core business. The 4th chapter encompasses all benchmarks of the competitive position, outlining key points and differentiators from its peers. It explains the company's business model, value creation process, and lists the services it offers. Following this, a list of key points related to the company and fundamentally the telecommunications industry, outlining recent developments and future prospects, is presented.

Later, an analysis of the company's performance and that of its peers is conducted, focusing on environmental sustainability, social responsibility, and corporate ethics (ESG). The following chapter details the study of past financial reports and estimates future performance. In this chapter, a comparison using financial ratios between Orange and peer companies is also made. These analyses converge into the "Valuation" section, where Future Cash Flows are estimated, alongside future performance metrics and market information, determining the intrinsic value of the company and, consequently, its Equity. Simultaneously, an Equity assessment is conducted using multiples calculated from financial ratios. A detailed analysis of the assumptions used in estimating Equity value follows, constructed through the study of the percentage fluctuation of key variables and their impacts on stock value in response to these fluctuations. The report concludes with a meticulous description of potential risks the company may face, emphasizing the likely impact of these challenges and how such contingencies could be reflected in the Equity value.

In conclusion, the Research Report extensively describes Orange's business model and the strategic plan on which it is based. It highlights the crucial role the telecommunications industry has played globally in recent years, expected to intensify in the short to medium term. Considering all these factors and the economic context in which it operates, Orange appears to be a promising investment opportunity.

Keywords: Corporate Valuation, Equity, ESG, Financial Markets, Future Cashflows, Orange, Telecommunications, Investment recommendation, Peer analysis, Sensitivity Analysis, Valuation.

Disclaimer: This Equity Research Report was prepared for academic purposes only by Tiago Miguel Rodrigues Martins, a student of the Master's in Management at the University of Minho. The report was supervised by a faculty member acting merely as an academic mentor. Neither the author of this report nor the supervisor are certified investment advisors. This report should be read as a pure academic exercise of a Master student. The information used to produce this report is generically available to the public from different sources and believed to be reliable by the student. The student is the sole responsible for the information used in this report, as well as the estimates and forecasts, application of valuation methods, and views expressed. The University of Minho and its faculty members have no unique nor formal position on those matters and do not take responsibility for any consequences of the use of this report.

The purpose of this Equity Research Report is to arrive at an investment recommendation for the shares of Orange SA, a public French company, in the industry of Telecommunications Services, listed in both the Euronext Paris and BIT (Borsa Italiana), under the ticker symbol ORA. They are also listed on the New York Stock Exchange (NYSE) under the ticker ORAN.

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Investment Summary

Figure 1 – Current Share Price



Source: Yahoo Finance

€10.60 09/03/2024

Figure 2 – Investment Recommendation

Recommendation	BUY
Date	09/03/24
Current Price	10,60 €
Target Price	11,96 €
Upside	12,87%
Economic Sector	Technology
Industry Group	Telecommunications Services
Industry	Integrated Telecommunications Services
Sector	Communication Services
Ticker	ORAN
Shares Outstanding	2658M
Market Capitalization	29663M €
EPS (2022)	0,73 €

Source: Orange Website and Own Estimates

I issue a **BUY** recommendation for Orange SA with a target price of € 11.96 (Figure 1), presenting a 12.87% upside potential (for March 2024) to the current share price € 10.60 on March 9th. My recommendation is based on an analysis on their previous financial results from 2017 to 2022, a Discounted Cashflow (DCF) Model for the period between 2024 and 2027, connected through my estimates for their 2022/2023 financial results (Figure 2). This upside is based on several key factors that will determine the future performance of Orange as a company.

History of Orange SA

Figure 3 - Orange Countries around the world



Source: Orange Website

Brief

Orange, the primary telecoms operator in France, is a prominent digital company worldwide. It extends its fixed and mobile networks across 26 countries in Europe, Africa, and the Middle East for individuals and nearly 220 countries and regions for businesses (Figure 3). Utilizing their specialized skills, they create, manage, and offer shared infrastructure solutions, focusing on developing efficient, secure, and eco-friendly networks. The key objective is to ensure high-performance networks with reduced carbon footprints.

History and Management Team

Launched on April 28, 1994, in a predominantly analog era, Orange is approaching its 30th year while remaining true to its original friendly and straightforward brand values. Despite its UK origins, it is now headquartered in Paris, France, maintaining a focus on people-centric services. This commitment persisted through growth, social changes, and even after France Télécom's acquisition in 2000. France Télécom acquired Orange as the European telecoms market opened to competition. As the market leader in France, Orange expanded its presence globally by consolidating its subsidiaries under the Orange brand, serving 123 million customers in over 30 countries by the end of 2009.

In a significant move, on July 1, 2013, France Télécom changed its name to Orange, marking a new phase for a company deeply rooted in public service culture (Figure 4). Although the name France Télécom is no longer used, its historical infrastructure played a pivotal role in shaping the extensive French telephone network, leading to advancements in mobile telephony and the internet (Appendix 1).

Business Description

Business Description

Orange, a leading global telecommunications operator, serves 287 million customers across 26 countries under the Orange Business brand. With 136,000 employees, the company is a key player for multinational businesses. The brand's robust identity, distinctive philosophy, and a new purpose integrated into its bylaws have propelled it to become one of the world's most influential brands. In 2022, Orange's revenues approached nearly 43.5 billion euros, highlighting its significant market presence and financial success.

Figure 4 – Evolution of Orange



Source: Orange Website

Figure 5 – Mutualized Solutions for Digital Infrastructure



Source: Orange Website

Figure 6 – Fixed and Mobile Network



Source: Orange Website

Figure 7 – IT and Cybersecurity Services



Source: Orange Website

Building infrastructure and operating networks

Orange holds a leading position in the deployment of fiber-optic infrastructure across Europe, boasting over 46 million FTTH connections by the end of 2022. The commitment to expanding fiber coverage in rural areas is evident through the efforts of the two European FiberCos. The Group strategically deploys 5G in Europe and Africa, prioritizing high-connectivity areas and addressing saturation in 4G networks. With ownership of 450,000 km of submarine cables worldwide (Figure 5), Orange supports digital dominance in Europe through its network of data centers. Additionally, its subsidiary Totem enhances Orange's role as a prominent manager and operator of passive mobile infrastructure.

Offering connectivity, financial, IT and cybersecurity services

The core of Orange's business model is centered on delivering reliable services and an exceptional customer experience. Leveraging the strength of the Orange brand, an extensive physical distribution network spanning 4,900 stores globally and 1.5 million resellers in Africa and the Middle East, as well as digital channels, they are committed to creating accessible and inclusive products and services. This commitment enables Orange to provide trusted digital services that indulge to all customer needs and expectations (Figure 6).

The deployment of high-speed networks (fiber, 4G, 5G, etc.) ensures the delivery of connectivity solutions to retail, business, and wholesale customers. With 11.6 million convergent fixed and mobile customers, Orange offers innovative and value-creating mobile services, drawing on its expertise as an infrastructure operator and connectivity solution provider. Orange contributes massively to business digital transformation, mainly due to the work on IT services, encompassing cybersecurity, cloud computing, artificial intelligence, and data analysis (Figure 7). This involves providing businesses with innovative solutions aligned with sectoral changes, fostering improvements in economic performance. Orange Cyberdefense, with 2,700 experts and 32 cyber threat detection centers, has emerged as a leading provider of cybersecurity services in Europe.

Figure 8 – Mobile Customers

Number of mobile customers in Europe (in millions)



including mobile customers in France* (in millions)



Source: Orange Annual Report 2022

Orange's robust performance in its eight European operating countries is anchored in its convergent offers and multi-service strategy. Additionally, the company continues to advance its acquisition policy, capitalizing on the consolidation of the European telecoms market. This strategic approach aims to bring substantial benefits to all Orange customers across the continent (Figure 8).

Solid performance across eight operating countries

In 2022, Orange demonstrated strong commercial performance in France, acquiring 1.3 million fiber customers and achieving the best mobile net additions (581,000) since 2017, accompanied by the lowest churn rate.

Other European countries experienced growth, with a 2.9% increase in retail services driven by convergence and BtoB market growth.

Figure 9 – Main Source of Countries Growth

Main Source of Growth	
Belgium	High speed Network market
Luxembourg	5G Network
Poland	Fiber Network
Slovakia	New Offers
Romania	5G Network

Source: Own Estimations

In Spain, efforts to restore margins resulted in a return to growth in the second half of the year, despite a 1.5% annual revenue contraction.

Belgium achieved high operational performance with 2% revenue growth, focusing on the high-speed network market (Figure 9).

Luxembourg adapted its portfolio in line with its challenger position, capitalizing on the 5G network launched in 2020. Poland achieved 4.7% revenue growth, primarily due to fiber network expansion.

In Slovakia, the service portfolio expanded with new generation offers, and in Romania, the 5G network extended to 23 urban areas. A 5G spectrum auction in Romania supported ongoing digital transformation.

Moldova's strong performance resulted from the transition to fiber-optic networks, reaching over 2 million customers with a high-quality mobile network.

Value creation through innovation

In the dynamic landscape of increasingly evolving technologies, Orange Innovation leverages the expertise of 8,000 employees, including 680 researchers, to develop impactful solutions that are both competitive and create value for the Group and its stakeholders. Teams, both in France and globally, conduct experiments in key areas such as network virtualization, the Internet of Things (IoT), and artificial intelligence, collaborating closely with Orange Business teams.

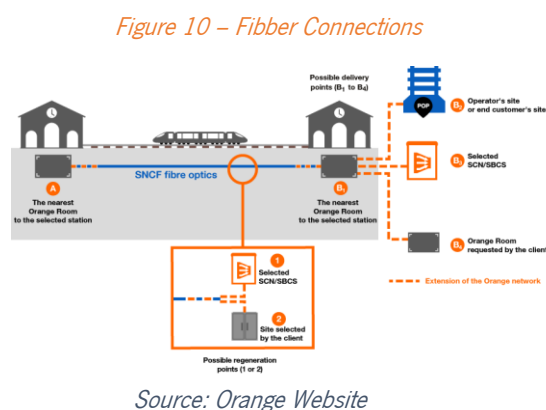
Orange actively engages in numerous collaborative research projects and initiatives, leading approximately 50 projects with French, European, and international partners. The company forges partnerships with seven competitive clusters, five research chairs, and three shared laboratories, highlighting its commitment to advancing innovation through collaborative efforts.

With nearly 10,000 patents filed, Orange possesses the second-largest intellectual property portfolio among European operators. This extensive portfolio includes crucial patents for various telecom standards, encompassing essential technologies like radio, 4G, and 5G, as well as audio and video compression coding. Orange is strategically positioned for the future, holding substantial intellectual capital

in areas such as cybersecurity (with over 500 patents and software pieces), quantum computing, and artificial intelligence. In 2022 alone, the company added 207 new inventions to its unique technological assets, actively licensing them to over 2,000 industrial partners worldwide.

To encourage innovation within the startup ecosystem, Orange established one of the first accelerator networks globally—Orange Fab. With a presence in Europe, Africa, the Middle East, and North America, the Orange Fab accelerators provide support to promising startups in business development and management practices. These programs focus on specific themes, aiming to generate new business opportunities through partnerships with Orange business units and external partners.

For over a decade, Orange has been a pioneer in bringing fiber-optic internet to homes and businesses, leading the European market by making 61.7 million homes fiber-ready and deploying almost 46 million fiber-to-the-home (FTTH) connections by the end of 2022. The rapid deployment and dense network facilitated gaining 1.1 million customers in 2022, expanding the total customer base to 12.9 million. The commitment extends to Africa and the Middle East, where Orange aims to serve 1.3 million fiber customers by 2025, contributing to increased digital coverage and regional development.



In France, Orange dominates the fiber market (Figure 10) with 7.2 million customers at the end of 2022, marking a significant increase of 1.3 million from 2021. Notably, half of FTTH internet subscription sales were to new retail customers, emphasizing the potency of fiber as a customer acquisition tool and a major growth driver. The FiberCo Orange Concessions increased FTTH availability to over 2.5 million households in rural areas, covering 80% of the population with speeds up to 2 Gb/s. France boasts one of the largest fiber footprints in Europe.

In Spain, Orange has made 16.8 million homes fiber-ready, while in Poland, the fiber customer base experienced a robust growth of 23.9% in 2022.

Continuing to expand 4G coverage and speeding up 5G network deployment

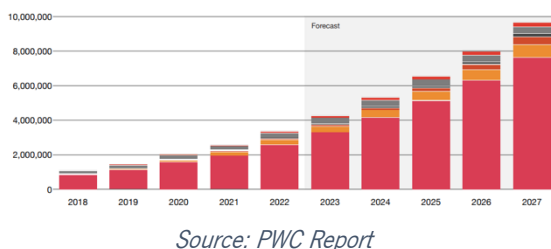
Orange is committed to expanding its 4G coverage, reaching nearly 99% of the population in its eight operating countries in Europe. In mainland France, the 4G network already covers 99.7% of the population, with ongoing investments in rural areas, including participation in the New Deal Mobile initiative. This initiative, launched by Arcep and the French government in 2018, aims to enhance mobile coverage across the country. Furthermore, Orange is accelerating its 5G network deployment. The 5G networks are currently available in Botswana and seven European countries—France, Luxembourg, Poland, Romania, Slovakia, Spain, and Belgium.

Industry Dynamics

The telecommunications industry faces a strategic challenge due to its utility-like nature, providing essential services to billions of consumers and businesses worldwide. The sector anticipates a threefold increase in global data consumption, driven by video traffic, from 3.4 million petabytes in 2022 to 9.7 million petabytes in 2027. However, providers face limited pricing power in the increasingly commoditized connectivity and data services market. Revenues from internet access, serving as a proxy for broadband spending, are expected to grow at a modest 4% CAGR, reaching US\$921.6 billion by 2027. Simultaneously, telecom companies (telcos) must make substantial investments in costly infrastructure to support customer needs. With the ongoing transition to 5G and the adoption of newer technological standards, telcos are projected to invest a significant US\$342.1 billion in their networks in 2027 alone.

Telecom companies, while continuing their emphasis on cost-cutting, optimization, and automation, are identifying growth opportunities in various areas. These include Internet of Things (IoT) solutions, private 5G networks for business customers, fixed wireless home broadband for households, and the provision of digital infrastructure, data, content, and platform services customized for sectors like entertainment and media (E&M), healthcare, manufacturing, and mobility in specific markets. In pursuit of these growth areas, telcos are strategically focusing on becoming more adept at collaborating within the broader ecosystems that are driving transformation in the expansive telecommunications industry.

Figure 11 – Global Data Consumption



1. The consumer remains at the centre as demand for data rises

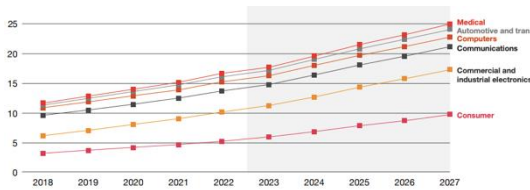
In the business-to-consumer (B2C) sector, telecom companies are witnessing increased demand driven by evolving user preferences, particularly as new devices with higher data requirements emerge. This demand is predominantly fueled by the surge in video consumption, constituting nearly 79% of the projected 9.7 million petabytes of data consumed in 2027 (Figure 11).

The additional data consumed by video between 2023 and 2027 alone is expected to surpass the total data consumption across all categories in 2022. Traditional communications data, which experienced a 104% rise from 2018 to 2022, is projected to grow at a more moderate rate of 26.8% from 2023 to 2027.

A combination of technological innovations, fierce competition, and changing consumer expectations, partly influenced by cost-of-living pressures, is contributing to a decline in the price of data. Consequently, internet access revenues are expected to grow roughly in line with global GDP, reaching \$921.6 billion in 2027 from \$757.7 billion in 2022, reflecting a 4% CAGR.

Recognizing the challenges in relying solely on connectivity revenues, telcos are actively seeking diversification into additional revenue streams, including content subscriptions and Internet of Things (IoT) applications.

Figure 12 – Different Application for lot devices



Source: PWC Report

Over the next five years, enterprises' strong interest in IoT use cases is expected to translate into increasing revenues. IoT devices, which have become commonplace, will become pervasive, with the total number of installed devices projected to rise from 16.4 billion in 2022 to 25.1 billion in 2027—approximately three devices for every human on the planet. The consumer sector is forecasted to experience the most significant growth, with the number of devices approaching 10 billion in 2027. This growth reflects consumers' adoption of home ecosystems built around multiple devices, with smart speakers serving as control points for various systems, communicating through protocols like IFTTT (If This Then That) and Matter (Figure 12).

Figure 13 – 5G Impact on Telecom Ecosystem

5G will significantly impact how telecom equipment and networks are designed and engineered, creating engineering imperatives for all providers and enablers of telecom services, including these six impact themes



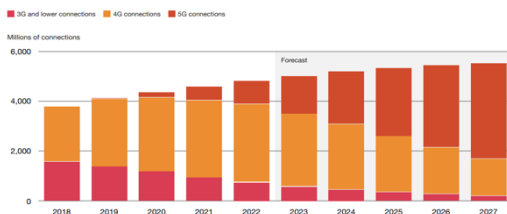
Source: Everest Group

2. Driving business adoption for the internet of things

In the business and corporate customer segment, the adoption of Internet of Things (IoT) is increasing across various industries, although revenues have seen linear growth rather than exponential. Current constraints in chipsets and networks limit the promised low energy, for many simple IoT use cases. Businesses face challenges in deploying and managing IoT solutions, emphasizing the need for a collaborative ecosystem involving telcos, software and cloud providers, and system and business integrators to develop more effective and scalable solutions.

Given the growing demand for high-speed and low-latency networks across diverse industries, telcos are seeking efficiency and scalability by partnering with specialists across their ecosystems. The landscape for IoT is evolving from telcos working alone to ecosystems comprising telco and tech players, each contributing complementary strengths. In the B2B context, there is a heightened focus on private networks connecting onsite IoT devices to analytics and robotics, requiring a range of services from cloud, telecom, hardware and software providers, including edge computing services, security, integration, and private network installation and operation (Figure 13).

Figure 14 – 3G, 4G and 5G World Connections



Source: PWC Report

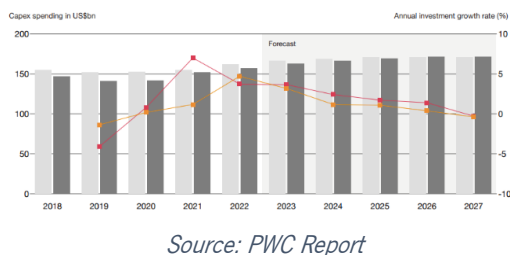
3. Network evolution shapes the future of the telecom industry

The future for telcos and their customers is becoming increasingly diverse in terms of network choices. By the beginning of 2023, nearly 200 telcos had rolled out 5G networks, with more expected to follow in the subsequent year. 5G is projected to become the leading smartphone connection type in 2025, surpassing 50% of the total, and is forecasted to rise to over two-thirds by 2027. While fiber deployment is gaining momentum, the adoption of Open Radio Access Networks (Open RAN) remains niche but is witnessing notable initiatives (Figure 14).

Historically, capital spending on successive generations of mobile network technology has occurred in ten-year cycles, with substantial growth in 2021 and 2022 as the industry invested in 5G build-out. Total telecom capital expenditure (capex) increased by 4.2% in 2022 to reach US\$319.1 billion, the highest in the ten-year period. Looking ahead, the growth rate in both fixed and mobile broadband investment is expected to decline annually through 2027 due to higher inflation and interest rates, instilling caution in capital spending.

In 2026, mobile network capex is predicted to surpass fixed broadband investment. Key drivers for telco capex growth include 5G deployment, expansion of fixed fiber infrastructure, cloud system migration, and exploration of open-source network solutions.

Figure 15 – Growth Rate in Capital Expenditures in Networks



The sustained high level of investment intensity will continue to place pressure on telcos' financing and debt levels, emphasizing the need for improving operational efficiency, monetization, and cost control (Figure 15). Many operators, including T-Mobile US, Rain, Singtel, Vodafone, STC, and Orange itself, have launched 5G standalone networks. Some are investing in neutral host networks, offering access to multiple providers, while others aim for economies of scale and synergies through mergers, pooling resources to invest in integrated and scalable 5G networks.

Enabling ecosystems

The Global Telecom Outlook highlights a rapidly evolving industry (Figure 16), presenting both challenges to existing business models and significant opportunities for incumbents and new entrants. Regardless of the chosen focus areas and pockets of growth, it is evident that substantial investment in time, money, strategic thinking, and resources will be essential for the telecom industry to innovate.

Entering an era where revenue growth and optimization opportunities may be limited, coupled with an increase in the cost of capital, all carriers are required to master the capabilities of being a utility. This involves efficiently constructing and operating network assets to earn back the cost of capital with an added margin. Companies must prioritize the monetization of assets through sales or carve-outs as they adapt their strategic priorities to navigate the changing landscape.

Figure 16 – Evolution of Telecom Market in France in USD B\$



Source: Mordor Intelligence and Own Estimates

Porter's 5 forces model:

Threat of New Entrants: LOW

High Capital Requirements: The telecommunications industry demands significant capital investments in network infrastructure. Orange has invested billions in developing and maintaining its extensive fiber-optic and mobile networks.

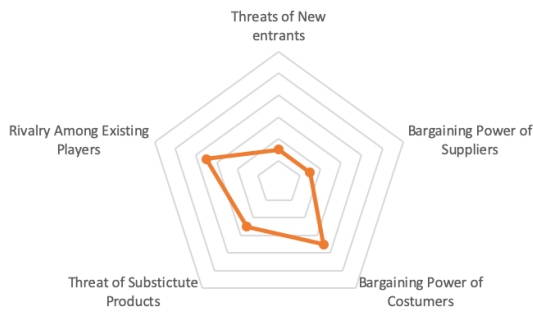
Regulatory Barriers: Strict regulations and licensing requirements, especially in the allocation of spectrum, act as barriers. Orange, being a well-established player, navigates these regulatory landscapes effectively.

Bargaining Power of Suppliers: LOW

Diverse Supplier Base: Orange sources network equipment from various global suppliers like Ericsson, Nokia, and Huawei. This diversity minimizes dependency on a single supplier.

Standardized Inputs: The majority of network components and devices follow industry standards, reducing the bargaining power of individual suppliers. Orange's scale allows negotiating favorable terms.

Figure 17 - Porter's 5 Forces Model



Source: Own Estimations

Bargaining Power of Customers: MODERATE

Consumer Choice: Customers have a range of telecom providers to choose from. Orange competes by offering competitive pricing plans, innovative services like Orange TV, and superior customer service.

Switching Costs: While customers can easily switch providers, the hassle involved, and potential loss of bundled services may moderate their bargaining power. Orange's focus on customer experience helps retain loyalty.

Threat of Substitute Products: LOW/MODERATE

Alternative Technologies: Emerging technologies like Over-The-Top (OTT) services or satellite communication pose a moderate threat. Orange combats this through strategic partnerships (e.g., offering OTT services) and emphasizing the reliability and speed of its networks.

Essential Service: Telecommunications services are considered essential, and Orange's diversified offerings, including mobile, broadband, and enterprise solutions, make it a preferred choice.

Rivalry among Existing Players: MODERATE

Competitive Pricing: Orange competes on pricing, regularly adjusting its plans to stay competitive with rivals like Vodafone and Deutsche Telekom.

Innovation: To stand out, Orange focuses on innovation, such as its involvement in 5G development and smart city initiatives. The launch of Orange Bank demonstrates its commitment to diversification beyond traditional telecom services.

This detailed analysis showcases how Orange SA navigates the complexities of the telecommunications industry, leveraging its strengths to mitigate potential risks and maintain a competitive position (Figure 17).

Environmental, Social and Governance (ESG)

Table 1 – ESG Score Evolution

	2022	2021	2020	2019	2018
ESG Combined Score	A-	A-	A-	B-	C+
ESG Score (Weight 100.0%)	A-	A-	A-	A-	B+
Environmental Pillar Score (Weight 20.3%)	A-	A	A	A	A
Social Pillar Score (Weight 53.2%)	A	A	A+	A+	A
Governance Pillar Score (Weight 26.5%)	B-	B-	C+	C+	C
ESG Controversies Score	A-	A-	A+	D+	D+

Source: Refinitiv Eikon and Own Methods

As corporations increasingly acknowledge the significance of environmental sustainability, social responsibility, and ethical governance, the evaluation of Environmental, Social, and Governance (ESG) factors has become indispensable.

Over the past five years, Orange SA has witnessed a steady uptrend in its ESG scores, highlighting its significant commitment to long-term value and risk management (Table 1). In the telecom industry, where distinct weights are assigned to each dimension, the one that stands out is the social aspect, accounting for over half of it.

The company's dedication to social responsibility is reflected in robust scores over the years, accompanied by continuous improvements in the environmental and governance pillars. Despite advancements, the governance score still indicates a huge potential for further refinement. Notably, the controversies score has exhibited significant relative growth, signifying Orange's proactive approach in addressing and managing contentious issues. The exploration of these dynamics will be made in the subsequent sections, detailing every metric and the relative position of Orange when compared to its peers.

ESG Peer Summary

Table 2 – ESG Peer Summary

	ORAN.PA	BCE.TO	SCMN.S	STEL.SI	TLS.AX
	Orange SA	BCE Inc	Swisscom AG	Singapore Telecommunications Ltd	Telstra Group Ltd
Company Market Cap (Mil USD)	\$30 730,00	\$35 213,00	\$31 315,00	\$28 867,00	\$28 423,00
Total Revenue (Mil USD)	\$46 523,00	\$17 842,00	\$12 021,00	\$10 991,00	\$15 133,00
ESG Combined Score	78,14	68,8	57,63	47,33	48,67
ESG Score	79	68,8	72,12	79,96	83,62
Environmental Pillar Score	80,57	81,53	86,45	60,33	71,11
Social Pillar Score	90,44	65,31	66,67	81,04	88,69
Governance Pillar Score	57,9	66,04	71,87	92,83	83,06
ESG Controversies Score	76,47	100	43,14	14,71	13,73

Source: Refinitiv Eikon And Own Estimates

As we can analyze by Table 2, Orange SA stands favorably among its competitors, despite some rivals boasting higher ESG scores, such as Singapore Telecommunications Ltd and Telstra Group.

The robust overall performance is attributed to its outstanding Social Pillar Score of 90.44, constituting more than half of the ESG Score of 79.80. This distinct advantage in the Social Pillar sets Orange SA apart from its peers, surpassing even the best competitor by a clear margin.

On the flip side, a conspicuous and distinctly negative factor emerges upon scrutinizing the table. The Governance Pillar Score is unequivocally the least favorable among all industry competitors. Despite its relatively modest weight of 26.5%, it significantly diminishes the final score, restraining Orange SA from securing an even more prominent position in the industry. The factors contributing to this performance will be thoroughly analyzed later on.

Concerning the environmental factor, Orange SA positions itself in an intermediary stance with a score (still quite satisfactory) of 80.5. Regarding the ESG controversies score, it falls just short of BCE.TO, which is still commendable and offers ample room for improvement.

Environmental

Orange's commitment to environmental sustainability is clear in its ambitious targets for reducing greenhouse gas emissions. The company aims for a 45% reduction in emissions by 2030 across three categories: direct emissions from buildings and vehicles (scope 1), indirect emissions from purchased electricity and heating (scope 2), and upstream and downstream indirect emissions (scope 3). Lead the Future, Orange's strategic plan, reinforces climate change mitigation goals, targeting a 30% reduction in scope 1 and 2 CO₂ emissions related to digital activities and a 14% reduction in scope 3 emissions by 2025.

Figure 18 – Scope 1,2 and 3 Emissions



Source: PWC Report

Renewable energy adoption is a key focus for Orange, with 37.8% of its electricity sourced from renewable sources in 2022. Power Purchase Agreements (PPAs) and agreements ensuring a Guarantee of Origin contribute to this effort, covering a significant portion of the company's electricity needs. Orange is also investing in solar energy generation systems across its sites in Africa and the Middle East. The company emphasizes energy efficiency in networks, buildings, and vehicles, achieving a 6.3% reduction in scope 1 and 2 CO2 emissions in 2022 (Figure 18). The Green ITN program employs AI to optimize consumption, advanced standby modes, and network sharing, resulting in substantial energy savings since 2015.

Orange is actively working on reducing scope 3 emissions, incorporating environmental criteria in tenders and encouraging suppliers to lower their emissions (Appendix 3). The company targets a 14% reduction in scope 3 emissions by 2025. In alignment with France's energy-saving plan, Orange introduced measures to decrease building-related energy consumption and shared eco-friendly guidance. The company is also addressing emissions from tertiary-sector buildings and company vehicles, with plans to reduce energy consumption by 40% and transition to electric vehicles. Eco-design principles are integral to Orange's product and service development, aiming to ensure all Orange-branded products meet eco-design criteria by 2025. The company views eco-design as a driver of innovation and a means to differentiate itself in the market, emphasizing training and recruitment in this area.

Table 3 - Environmental Score Evolution

	2022	2021	2020	2019	2018
Environmental Pillar Score (Weight 20.3%)	A-	A	A	A	A
Resource Use (Weight 7.1%)	A+	A+	A+	A+	A+
Emissions (Weight 7.1%)	A	A	A	A+	A+
Innovation (Weight 6.2%)	B	B	B	B	B

Source: Refinitiv Eikon and Own Methods

In summary, upon a more direct examination, as can be seen in the Table 3, the Environmental Pillar Score reveals some different outcomes across its three segments, albeit all bearing comparable significance. Unlike the innovation segment, which has exhibited less-than-satisfactory values over the past five years with no apparent alterations, the resource use category has consistently delivered highly positive results, indicative of an incredible performance. Despite emissions witnessing a decline since 2020 one could still assert that they exhibit commendable outcomes.

Social

Data protection governance structure

Orange's social commitment is essentially related to data protection, increasing digital technology accessibility, and promoting diversity and inclusion. It involves collaboration with stakeholders across all operating countries (Appendix 4). A fundamental aspect of this commitment is ensuring data protection through a solid governance structure. The focus on cybersecurity is evident in a security improvement policy that assesses and manages risks, especially cyber threats.

In 2022, over 23,000 employees underwent extensive training, totaling more than 214,000 hours, covering cybersecurity fundamentals, General Data Protection Regulation (GDPR), and encryption tools. Additionally, guidelines on personal data protection were disseminated to points of contact, available in five languages on the company's intranet.

In response to escalating cyber threats, customer data protection becomes a very important subject. Orange provides a comprehensive set of solutions for business customers in France, that includes for example "Suite de sécurité pro" and "SugarSync". Orange Cyberdefense, a leading provider of cybersecurity services in Europe, collaborates with businesses of diverse scales, offering customized data security solutions.

Diversity and inclusion, powerful drivers of long-term performance

Orange is dedicated to promoting digital literacy and ensuring universal access to fundamental digital skills. Through initiatives like the Orange Foundation's programs and digital workshops conducted by Orange in France, Orange Studio in Poland, and Garage Labs in Spain, a comprehensive and accessible understanding of essential digital concepts is provided.

Since its launch in 2014, the Supercodeurs program has educated children aged 9 to 13 across several operating countries, introducing them to digital challenges and potential careers. In Africa and the Middle East, the Digital Schools program, supported by the Orange Foundation, has equipped primary school pupils with tablets and educational materials, facilitating their engagement with digital technology.

In 2022, the Orange Foundation's Women's Digital Centers program significantly contributed to the social and professional integration of nearly 7,000 women. From early 2021 to late 2022, one million individuals benefited from Orange's digital support and training initiatives. The objective is to extend this impact to 2.5 million people between 2021 and 2025 and reach six million by 2030.

Orange is committed to promoting gender balance and attending inclusivity in technical and digital professions. The Hello Women program launched in over 20 countries, primarily in Europe and Africa since 2021, aims to increase the percentage of women in innovation and technological roles from 21.2% to 25% by 2025.

To support women in reaching management positions, the group targets 35% of women in management networks by 2025. The percentage of female Executive Committee members increased significantly from 28.6% to 41.7% in 2022. Over 500 promising female employees across various countries received support through development and mentoring programs.

Orange prioritizes work-life balance for its employees by facilitating remote working, offering flexible hours, and introducing family-friendly measures. A landmark gender equality agreement signed in December 2021 provides male employees in France with an additional five working days of paid paternity leave, totaling 33 days.

Ensuring equal opportunities, Orange supports individuals with disabilities through a fair and inclusive recruitment process, promoting employee well-being, providing adapted solutions for customers, and collaborating with suppliers in the sheltered employment sector. The Neuroteam program focuses on supporting neurodivergent individuals, promoting awareness, providing inclusive management and recruitment training, and demonstrating how neurodiversity drives innovation.

In 2022, Orange reaffirmed its commitment to boosting LGBT+ representation by co-signing a charter by L'Autre Cercle. Over 450 individuals in France were trained on understanding religious beliefs, and support was extended to the non-profit organization Club 21e Siècle's efforts to combat origin-based inequality.

In promoting inclusive artificial intelligence (AI), Orange believes diverse AI teams are crucial to reducing bias. The International Charter for Inclusive AI, launched in partnership with the Arborus endowment fund in 2020, has accumulated nearly 125 endorsements. Following a Bureau Veritas audit in 2020, Orange became the first company to be awarded the "Gender Equality European & International Standard – Artificial Intelligence" (GEEIS-AI) label, renewed in 2022.

Table 4 – Social Score Evolution

	2022	2021	2020	2019	2018
Social Pillar Score (Weight 53.2%)	A	A	A+	A+	A
Workforce (Weight 13.7%)	A-	B+	A	A	A
Human Rights (Weight 14.1%)	A	A	A	A	A+
Community (Weight 8.8%)	A+	A+	A+	A+	B
Product Responsibility (Weight 16	A+	A+	A+	A+	A+

Source: Refinitiv Eikon and Own Methods

To emphasize the notorious work carried out in the social pillar by Orange, as we can see from the figure above, all metrics have demonstrated excellent performance over the past 5 years, with a particular emphasis on product responsibility and community, where the scores have remained consistently perfect for several years. Regarding the workforce and human rights, the scores have slightly decreased since 2018, but still present satisfactory results, indicating room for good improvement (Table 4).

Governance

In 2022, Orange implemented a new governance structure by separating the roles of Chair and Chief Executive Officer. Independent director Jacques Aschenbroich (Figure 19) serves as the non-executive Chairman, overseeing the Board of Directors (Appendix 2), while CEO Christel Heydemann (Figure 20) leads the executive management team. This model ensures adherence to principles of power separation and independence, enhancing monitoring and oversight. The 15-member Board, appointed for four-year terms, reflects diverse corporate expertise and skills aligned with Orange's strategy and purpose (Appendix 5).

Support from three specialized committees

The Board is composed by three distinct committees, each chaired by an independent director: The Audit Committee, the Governance and Corporate Social and Environmental Responsibility Committee (GCSERC), and the Strategy and Technology Committee (STC). These committees cover different aspects, such as financial reporting, risk management, internal control, ethics, debt and liquidity management, development projects, strategic planning, major projects, multi-year investment programs, technological partnerships, governance processes, corporate officers' compensation, CSR priorities, and workplace policies (Figure 21).

Figure 19 – Jacques Aschenbroich



Source: Orange Annual Report 2022

Figure 20 – CEO Christel Heydemann



Source: Orange Annual Report 2022

Figure 21 - 3 Specialized Committees

Audit Committee

- Financial Reporting
- Risk Management
- Debt and Liquidity Management
- Development Projects and Strategic Planning
- Fees and Operating conditions for statutory auditors

Governance and Corporate Social and Environmental Responsibility Committee

- Calculation of Corporate Officers and directors' variable compensation
- Governance arrangements and processes of the Board
- Identification of suitable replacements for outgoing Board members
- Review of the Group's main CSR priorities and monitoring of their implementation
- Monitoring of changes in employee barometer indicators and the policy on workplace gender equality and pay equity

Strategy and Technology Committee

- Review of major Projects carried out in preparation for the establishment of the new strategic plan
- Review of multi-year investment programs and major technological partnerships
- Review of the group's innovation and research objectives and the value they offer in terms of products, services or uses

Source: Orange Annual Report and Own Methods

Figure 22 – CEO Compensation Policy

Chief Executive Officer

2022 Compensation

- 34% Annual Fixed Compensation
- 32% Annual Variable Compensation
- 27% Multi-year Variable Compensation
- 7% Defined-contribution Retirement Plan

Criteria and Weightings

Financial Criteria

- 15% Organic revenue growth
- 15% Organic cash flow from telecom activities
- 20% EBITDAaL

Non-Financial Criteria

- 17% BtoC and BtoB service quality
- 33% Social performance

Performance Indicators

- 30% Total shareholder return (TSR)
- 50% Organic cash flow from telecom activities
- 20% Composite CSR indicator

Source: Orange Annual Report and Own Methods

Each committee ensures supervision and recommendations in its respective domain. The Executive Committee contemplates the operational management of Orange's business activities and has the responsibility of implementing the company's new strategic plan- "Lead the Future," launched in 2022. The committee has the important task of executing the strategy and exploring economic and structural challenges in the telecommunications sector.

A compensation policy reflecting the Group's balanced strategy

The compensation policy for Orange's Chief Executive Officer in 2022 reflects a balanced strategy with different components (Figure 22). It is composed by an annual fixed compensation of 34%, annual variable compensation of 32%, multi-year variable compensation of 27%, and a defined-contribution retirement plan constituting 7%. The criteria and weightings for the 2022 target annual variable compensation consist of financial elements such as 15% for organic revenue growth, 15% for organic cash flow from telecoms activities, and 20% for EBITDAaL. Adding to that, non-financial criteria, with 17% attributed to BtoC and BtoB service quality and 33% to social performance.

For the target multi-year variable compensation under the Performance share plan 2022-2024, performance indicators include a 30% contribution from total shareholder return (TSR), 50% from organic cash flow from telecoms activities, and 20% from a composite CSR indicator (with 10% each for CO2 emissions reduction and the rate of women's participation in management networks).

The three pillars of executive compensation

The fixed compensation is determined based on factors like the level of responsibilities, professional background, and market analysis for comparable positions. Regular studies conducted in collaboration with a benchmarking consultancy ensure competitiveness in compensation levels and structures.

Variable compensation aims to incentivize corporate officers to achieve annual performance targets aligned with the corporate strategy (Figure 38). It is divided between financial (50%) and non-financial (50%) criteria. In 2022, the ratio between the variable and fixed components for the Chief Executive Officer was approximately 1:1, reaching 1.5:1 when targets were exceeded.

Performance shares are granted under the Long-Term Incentive Plan, measuring executives' contribution to medium- and long-term value creation over a three-year period. This plan is available to members of the Executive Committee and executive and leadership networks.

The Chief Executive Officer's compensation package also includes a defined-contribution retirement plan and non-cash benefits, such as company cars and medical check-ups, where applicable.

Table 5 – Governance Score Evolution

	2022	2021	2020	2019	2018
Governance Pillar Score (Weight 26.5%)	B-	B-	C+	C+	C
Management (Weight 17.7%)	C+	C	C-	D+	D
Shareholders (Weight 5.3%)	A+	A+	A+	A+	A+
CSR Strategy (Weight 3.5%)	A-	A-	A-	B+	A-

Source: Refinitiv Eikon and Own Methods

Examining Table 5, we can perceive that the various metrics of the Governance Score have undergone slight changes in recent years, with a particularly positive emphasis on Shareholders and a less favorable position attributed to Management, which clearly requires improvement.

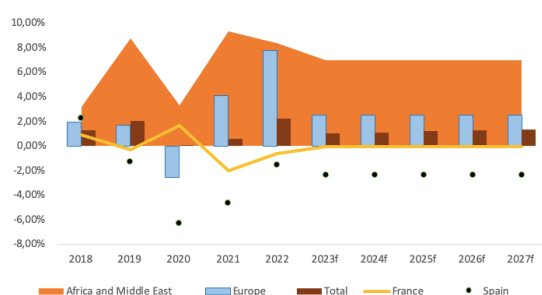
Financial Analysis

Table 6 – Revenues by Segment M (€)

	2017	2018	2019	2020	2021	2022	2023f	2024f	2025f	2026f	2027f
Africa and Middle East	5 030	5 190	5 645	5 834	6 381	6 918	7 402	7 920	8 475	9 068	9 703
Enterprise	7251	7292	7820	7806	7756	7930	7930	7930	7930	7930	7930
Eliminations - Telecom Activities	-1926	-1879	-1937	-1854	-1795	-2537	-2681	-2833	-2993	-3163	-3342
International Carriers and Shared Services	1651	1534	1498	1450	1516	1540	1519	1498	1477	1457	1436
France	18046	18211	18154	18460	18092	17983	17970	17958	17945	17933	17920
Spain	5231	5349	5281	4950	4721	4648	4539	4433	4330	4229	4130
Europe	5578	5687	5784	5638	5869	6327	6488	6654	6824	6998	7177
Totem						685	685	685	685	685	685
Segment Total	40861	41384	42245	42284	42540	43494	43951	44451	44996	45590	46236
Consolidated Total	40859	41381	42241	42269	42522	43471	43922	44413	44947	45526	46153

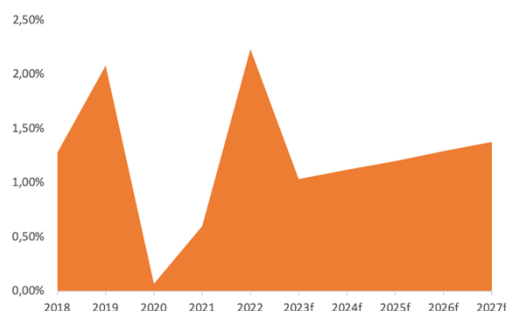
Source: Refinitiv Eikon and Own Calculations

Figure 23 – Growth rate by country



Source: Refinitiv Eikon and Own Calculations

Figure 24 – Total Growth rate until 2027



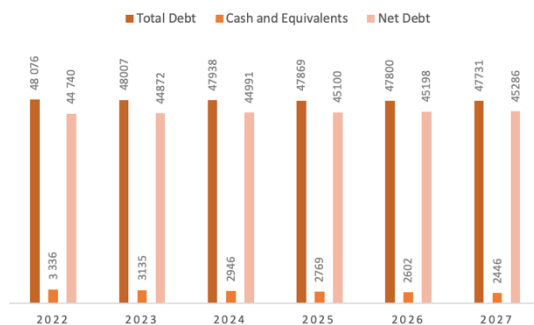
Source: Refinitiv Eikon and Own Calculations

Conversely, Africa and the Middle East represent one of the most significant sources of growth potential for the company in the coming years, with a projected annual growth rate of 7% over the next five years. This market, increasingly developed in recent years, presents a substantial business expansion opportunity. The innovative nature of this market suggests that Orange can scale its operations and achieve even better results.

In the overall spectrum, I expect the total revenues to experience increasingly higher growth rates in the coming years, reaching an estimated growth rate of about 1.38% in 2027 (Figure 24).

Moving onto the Profit & Loss (P&L) analysis, one of the key assumptions I made was the stability of Orange 's operations, where I assumed that the gross profit margin would remain constant at 59% from FY 2023 estimates for the near future. For the selling, general, and administrative (SGA) expenses, I assumed its 5-year average rounded percentage of sales of 28%. The predictions were then done based on the SG&A/sales ratio (28%) multiplied by sales in each year. The tax rate was another assumption I made during the valuation process, which I decided to kept constant at the rate of 32.59%.

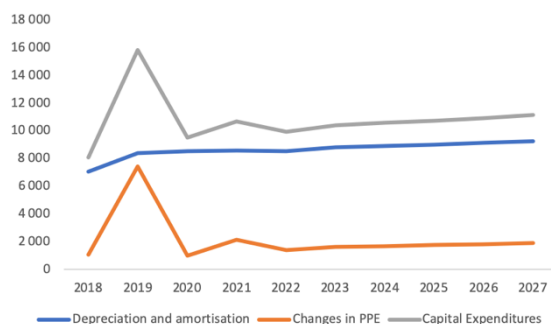
Figure 25 – Net Debt M (€)



Source: Refinitiv Eikon and Own Calculations

Related to Net Debt, a CAGR from 2019 to 2022 was applied to forecast its values from 2023 onwards. With a close to 1 (0.9986) this growth rate was then applied consistently to forecast the future years, reaching in 2024, a value of Net Debt of 44991€ (Figure 25). This assumption for this controlled net debt could mean that Orange can control better its interest expenses, the company is managing its finances prudently and not taking any excessive risks, and as we saw previously Orange might be preparing for new strategic investments and acquisitions and keeping net debt controlled could be a deliberate move to accumulate financial resources for future opportunities.

Figure 26 – Capital Expenditures M (€)

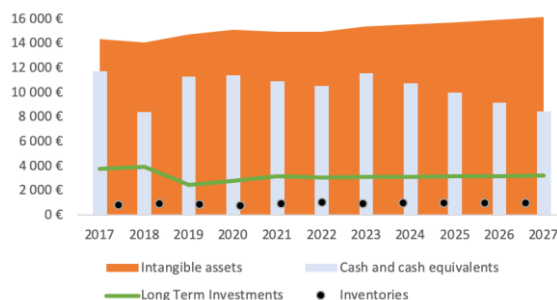


Source: Refinitiv Eikon and Own Calculations

Depreciations and amortizations were derived from the difference between EBITDA and EBIT, a value that progressively increased over the estimated years.

Working capital was calculated as the difference between current assets and current liabilities, with the change in working capital representing the increase/decrease in capital employed in the operating process of Orange. Capital Expenses (CapEx) were calculated by summing the depreciations & amortizations and the change in property, plant, and equipment (PPE), encompassing the increased need for more assets to sustain future growth and profitability (Figure 26). The PPE annual growth rate for the estimated period were based upon the CAGR of the last 4 years (2019-2022)- 4.06%, indicating investments in land, improvements, machinery and equipment still need to be made and the tendency is to always grow in the future.

Figure 27 – Balance Sheet Components Evolution

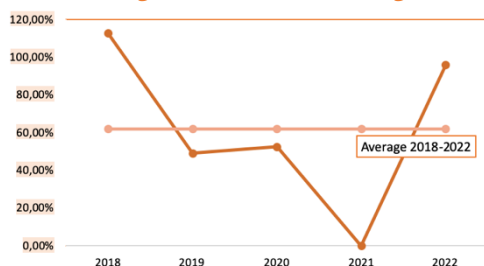


Source: Refinitiv Eikon and Own Calculations

As for the balance sheet (Appendix 6), when it comes to intangible assets, my prediction is based upon the 5-years average intangible/sales ratio of 35%, then adjusted for each year 's revenue- so it tends to grow as well as revenue. Goodwill is held constant due to the inability to estimate their value. Long-term Investments are growing at a defined rate of 1%, which mirrors the growth of other assets and the operating performance of the company. Long- term Notes Receivable are also assumed to be constant. Cash & Equivalents are kept as a control metric, with their value balancing the Assets and Liabilities (Figure 27). Related to inventories and total receivables they are estimated based on the 5-years average of Day 's inventories and day 's accounts receivable, respectively.

Moving on to the liabilities side, more specifically the current liabilities, the short-term debt for 2023-2027 was based on the average of the 5-year short term debt/equity ratio of 3%, and then adjusted to the equity in each year. Accounts payable I also estimated having in mind the 5-year average accounts receivable days (2017-2022). Accrued expenses, current portion of LT debt and other current liabilities I kept as controls metrics. For the long-term debt I based, once again, by the 5-year long term debt/equity ratio in the 2017-2022 period- 111%, and in the estimated period I adjusted this metric to the equity value to arrive at the long-term debt value each year (always increasing apart from 2023). For the Provisions, I held them constant throughout the period and the Other liabilities were also kept as control metrics.

Figure 28 – Retained Earnings



Source: Refinitiv Eikon and Own Calculations

Lastly, for Shareholder's equity, I estimated retained earnings by taking the last year transitory value, summing the retained earnings of the current period, subtracting the dividends paid (at a pay-out of 62%: 5-year average), reflecting the outflow of capital for investment needs (Figure 28). Common stock is held constant and reserves were kept as control metrics to achieve the total shareholder's equity.

Ratio Analysis

Table 7 – Orange's Ratios Evolution

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Profitability											
Gross Margin	57,8%	58,0%	60,2%	60,2%	59,9%	59,1%	59,0%	59,0%	59,0%	59,0%	59,0%
Operating Margin	11,7%	8,1%	11,7%	11,7%	14,0%	13,1%	5,9%	11,0%	10,8%	10,8%	10,9%
EBITDA Margin	30,0%	29,0%	33,9%	33,7%	33,7%	33,1%	33,0%	33,0%	33,0%	33,0%	33,0%
Effective Tax Rate	34,3%	37,8%	31,0%	-20,2%	55,3%	32,6%	32,6%	32,6%	32,6%	32,6%	32,6%
Net Margin	4,5%	4,7%	7,1%	11,4%	0,5%	4,9%	6,0%	6,0%	6,0%	6,0%	6,0%
Liquidity											
Current Ratio	0,75	0,72	0,90	0,89	0,95	0,92	0,88	0,85	0,82	0,79	0,76
Interest Coverage	3,99	3,54	4,30	4,50	5,06	4,98					
Solvency											
Assets/Equity	3,1	3,1	3,4	3,1	3,3	3,4	3,3	3,3	3,3	3,3	3,3
Debt/Equity	1,2	1,3	1,5	1,3	1,4	1,5	1,4	1,4	1,4	1,4	1,4
Activity											
A/R Turnover	6,4	6,4	6,5	6,2	5,7	5,5	4,1	4,1	4,1	4,1	4,1
Days Sales Outstanding	57,0	57,0	56,4	59,2	64,3	66,1	88,3	88,3	88,3	88,3	88,3
A/P Turnover	6,3	6,1	6,3	6,5	6,3	6,2	6,3	6,3	6,3	6,3	6,3
Days Payable Outstanding	58,3	59,4	57,7	55,9	57,8	59,3	58,1	58,1	58,1	58,1	58,1
Cash Cycle (Days)	-1,3	-2,4	-1,3	3,3	6,4	6,8	30,3	30,3	30,3	30,3	30,3
ROE	5,9%	6,4%	9,5%	14,0%	0,7%	6,7%	7,8%	7,8%	7,8%	7,8%	7,8%
ROA	1,9%	2,0%	2,8%	4,5%	0,2%	2,0%	2,4%	2,4%	2,4%	2,4%	2,4%
ROIC	5,4%	4,7%	5,4%	9,2%	3,5%	5,1%	4,9%	4,9%	5,0%	5,0%	5,0%

Source: Refinitiv Eikon and Own Calculations

Assessing a company's financial well-being is crucial for understanding its capacity to excel in a competitive market. In this section, my goal is to conduct a thorough examination of Orange, utilizing diverse financial ratios to assess its performance and standing within the industry. Initially, I will explore the historical progression of Orange's profitability, liquidity, solvency, and activity ratios (Table 7). These metrics will reveal insights into Orange's financial patterns over time, highlighting areas of both strength and vulnerability.

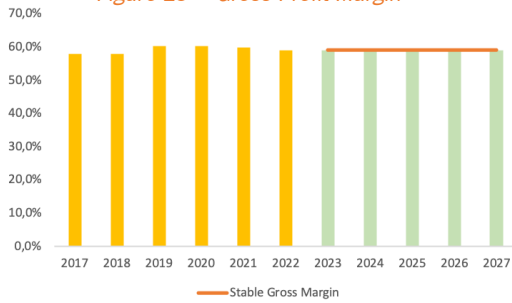
Moreover, I will compare Orange's financial ratios with those of its industry peers to discern its comparative performance and standing (Table 8). By evaluating Orange against its competitors, I can assess its competitive edge, market position, and potential areas for enhancement. This analysis aims to provide a comprehensive perspective on Orange's financial performance, offering valuable insights for investors, analysts, and stakeholders to make well-informed decisions regarding the company's future (see Appendix 8).

Table 8 - Ratios Comparison with Peers and Industry

Profitability	Deutsche Telekom	Vodafone	Telefonica ES	Swisscom	Telekom Austria	Proximus	Millicom	Orange SA	Average peers	Industry Median
Gross Profit Margin	56,17%	32,92%	47,77%	80,67%	56,38%	62,65%	68,76%	59,07%	58,05%	62,80%
EBITDA Margin	40,02%	42,89%	31,09%	40,92%	38,36%	31,85%	39,92%	33,07%	37,26%	39,20%
Operating Margin	17,19%	13,36%	10,76%	18,36%	19,12%	11,81%	16,27%	13,06%	14,99%	16,70%
Net margin	7,01%	4,91%	5,03%	14,42%	12,89%	7,69%	3,15%	4,93%	7,50%	10,20%
Effective tax rate	17,65%	32,42%	21,66%	18,34%	22,23%	22,15%	93,28%	32,59%	23,86%	18,20%

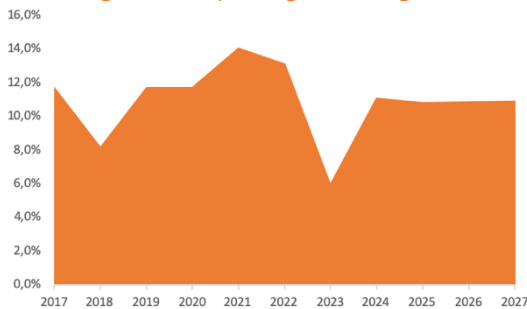
Source: Refinitiv Eikon and Own Calculations

Figure 29 – Gross Profit Margin



Source: Refinitiv Eikon and Own Calculations

Figure 30 – Operating Profit Margin



Source: Refinitiv Eikon and Own Calculations

The peer average of 37.26% indicates a less favorable performance by Orange in this metric, placing it ahead of only Telefonica ES and Proximus among all peers. This outcome may be a reflection of substantial investments related to the expansion of network infrastructure, particularly in the case of optical fiber network expansion.

Figure 31 – Gross Profit Margin comparison with Peers

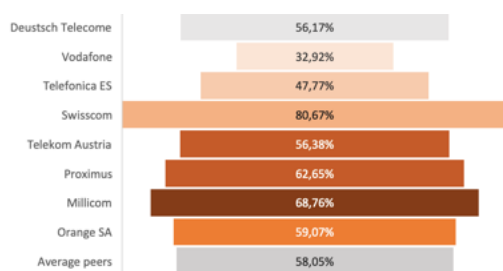
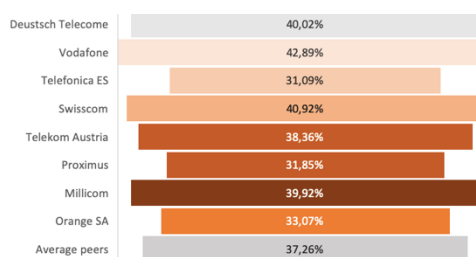


Figure 32 – EBITDA Margin comparison with Peers



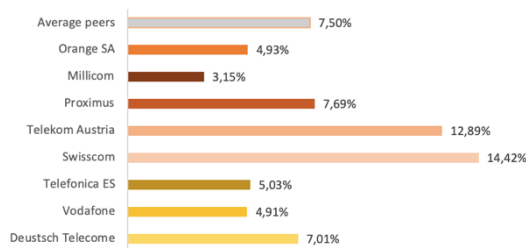
In terms of profitability measures, the gross margin has shown very consistent values since 2017, always around 58% to 60%. My forecast is that, from 2023 to 2027, it will settle at 59% (Figure 29), due to the fact that the gross profit growth rate is directly related to revenues. Therefore, with these growth rates connected, the gross profit margin remains constant. When compared to some of its competitors, Orange occupies an intermediate position in this aspect, with Swisscom, Millicom, and Proximus standing out as superior competitors (Figure 31). Analyzing the industry as a whole, Orange positions itself slightly below the median but still maintains a relatively comfortable stance, trailing only 3.73 pp below the median.

On the other hand, the operating profit margin has shown more fluctuations in recent years, and my forecasts also suggest a certain instability in this metric. With its peak in 2021 at about 14%, a sharp decline is expected in 2023 to 5.9%, mainly due to the forecast of a small increase in revenues and a slight decrease in EBIT (Figure 30). Subsequently, a significant appreciation is expected in the following years, with a trend of stability around 11%.

Regarding the EBITDA margin, it has oscillated between 30% and 33.7%, with a continuation at 33.07% expected from 2023 onwards (Figure 32). The net margin has been the ratio with the greatest disparities in recent years. After presenting an impressive ratio of about 11.4% in 2020, the best achieved in recent decades, in 2021, the net income suffered a huge setback due to a significant drop in net profit from continuing operations, leading to the net margin registering historic lows around 0.5%. Following that, as expected, a clear improvement was observed with a 5.5 pp increase in 2 years, and it is expected to remain at 6% from 2023 onwards.

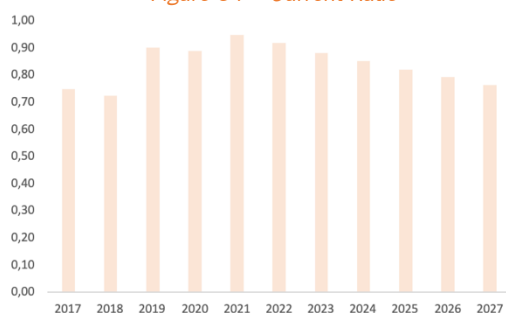
Similar to what was observed concerning the operating margin, the net margin of Orange also appears in an unfavorable position in these metrics, considerably below the industry average and the considered peers (Figure 33). There is, therefore, a significant margin for improvement to be considered in the short to medium term.

Figure 33 – Net Margin comparison with Peers



Source: Refinitiv Eikon and Own Calculations

Figure 34 – Current Ratio



Source: Refinitiv Eikon and Own Calculations

In summary, it is noteworthy that Orange, in terms of profitability ratios, is in a position that clearly requires improvement, especially when compared to its peers. However, this does not negate the fact that the company still maintains good financial health and promising future prospects (see Appendix 7).

In assessing Orange's liquidity ratios, I initially examine the Current Ratio (Figure 34), which reflects the company's ability to cover short-term obligations with its immediate assets. Despite historically having a ratio consistently below 1, around 0.85, it may appear that Orange could face challenges in meeting short-term debts with existing assets. However, I must consider the context within which Orange operates. In the telecommunications industry, having a current ratio below 1 is not uncommon, as evident in the industry analysis shown in Table 9 especially when the industry median is around 0.83.

This is attributed to the industry's characteristic substantial upfront investments in infrastructure and technology, leading to higher long-term assets and potentially lower current assets. Consequently, it is essential to consider other financial metrics and industry benchmarks to assess Orange's financial well-being. A slight annual divergence is anticipated in the upcoming years, with a projected ratio of 0.76 by 2027.

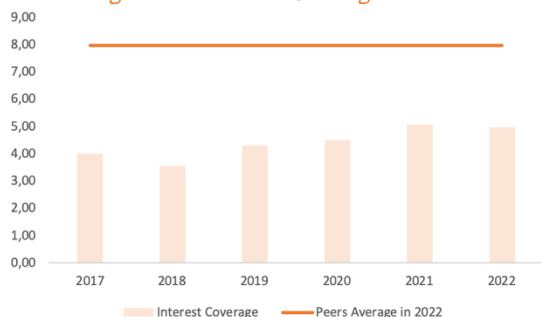
Table 9 – Liquidity Ratios Comparison with Peers and Industry

Profitability	Deutsch Telekom	Vodafone	Telefonica ES	Swisscom	Telekom Austria	Proximus	Millicom	Orange SA	Average peers	Industry Median
Current Ratio	0,86	0,82	0,98	0,89	0,60	0,62	0,97	0,92	0,83	0,83
Interest Coverage	3,35	2,21	1,87	20,81	16,75	12,25	1,59	4,98	7,98	

Source: Refinitiv Eikon and Own Calculations

Regarding the comparison with peers, it's worth highlighting the good performance, with Orange being surpassed only by Millicom and Telefonica ES, boasting a ratio about 9pp higher than the other competitors. This signifies efficient asset management and balanced financing strategies.

Figure 35 – Interest Coverage Ratio



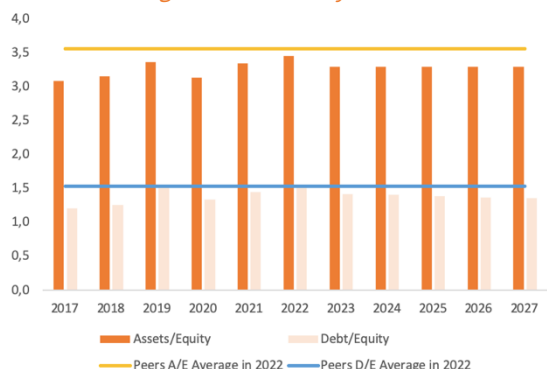
Source: Refinitiv Eikon and Own Calculations

Moving on to the interest coverage ratio, which indicates the company's ability to cover its interest expenses with its earnings before interest and taxes (EBIT), Orange has demonstrated robust financial strength. This is evident in the fact that, with the exception of 2018, the company consistently maintains EBIT values that are at least four times higher than interest expenses. This indicates a significant margin of safety to fulfill interest obligations, and when compared to peers, it appears in a comfortable position, superior to many of them, although it falls short of companies like Telekom Austria, Swisscom, and Proximus, which considerably elevate the average (Figure 35).

Shifting the analysis to solvency, the Assets/Equity ratio has been progressively increasing since 2017, except for 2020. This trend signifies sustainable growth, potentially reflecting a healthy expansion of the company's resources, increased efficiency in resource

utilization, and, as mentioned earlier, the impact of acquisitions and mergers by Orange. The forecast indicates that this ratio will stabilize at 3.29 by 2027, slightly surpassing the industry median of around 3.11.

Figure 36 – Solvency Ratios



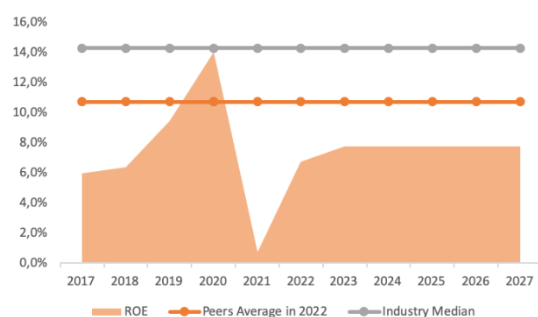
Source: Refinitiv Eikon and Own Calculations

Now turning to the Debt/Equity ratio, it is evident that this ratio has consistently exceeded the industry median of 0.87 year after year (Figure 36). From 2017 to 2022, the ratio has progressed almost every year, with the total debt being 1.51 times higher than equity in 2022. At first glance, this might suggest a riskier position in terms of indebtedness, especially when compared to peers. However, this higher ratio is beneficial for Orange as it efficiently utilizes debt to finance growth projects and investments that generate returns higher than the cost of debt. My forecasts for the future (2023-2027) anticipate a decreasing ratio.

As mentioned earlier, with a constant debt value reflective of 2022, a natural decline is expected, reaching a ratio of 1.35 in 2027. In both solvency ratios, Orange converges towards the average of its peers and, therefore, approaches what would be an optimal capital structure.

Moving on to the analysis of activity ratios, it is essential to note that certain assumptions regarding operating activities remain constant throughout the analyzed periods in the valuation process. Specifically, Accounts Receivables, Accounts Payables, Days Sales Outstanding (DSO), Days Payable Outstanding (DPO), and the Cash Cycle (DSO - DPO) are among these assumptions.

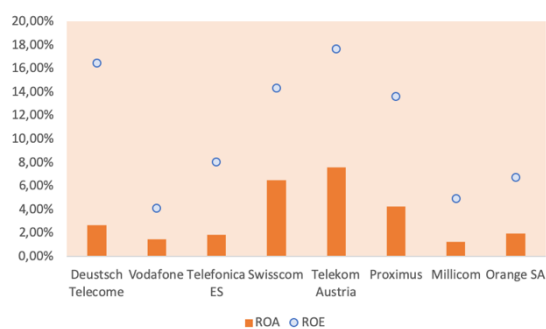
Figure 37 – ROE Evolution



Source: Refinitiv Eikon and Own Calculations

Regarding the Return on Equity (ROE), it has exhibited significant fluctuations since 2017, peaking at 14% in 2020 (Figure 37). In the following year, a sharp drop in net income led to historical lows of 0.7%. When compared to the telecommunications sector average (14.3%), it's noteworthy that the company is in a clearly unfavorable position in this metric, and clearly needs improvement. For the future, with a forecasted stabilization of debt and reduced subsequent leverage, an increase to 7.8% is expected in the next 5 years.

Figure 38 – ROE and ROA



Source: Refinitiv Eikon and Own Calculations

Regarding the Return on Assets (ROA), this ratio has also shown oscillations in recent years, reflecting the poor performance in 2020 and a rapid recovery in subsequent years. For the period 2023-2027, constancy is projected, with an expected fixation at 2.4%. Comparing with its peers, it exhibits a significantly lower ratio—the average of 3.44% far surpasses Orange's 1.96%, clearly highlighting the need for improvement, not only in this ratio but also in ROE (Figure 38). This improvement could be achieved in the future, for instance, through some of the new services that Orange aims to provide, particularly those related to Orange Business and Orange Cyberdefense.

Valuation Analysis

The valuation process entails a comprehensive analysis of multiple components that impact Orange as a business operating in diverse countries and industries, exposed to various sources of risk and opportunities. To begin with, the estimation of the cost of capital is crucial, as it measures the market-required rate of return as a firm. The process starts with the calculation of the cost of debt, which takes into account the risk-free rate, assumed here as the 10-year Germany Treasury rate long-term average (2.359%), and the rating-based default spread for the French market (0.53%), extracted from Professor Aswath Damodaran's datasets from January 2023. The tax shield effect of debt, using the FY 2022 effective tax rate (32.59%), is also incorporated to arrive at the after-tax cost of debt for Orange, which is 1.95%.

Table 10 – Cost of Debt

Cost of Debt				
France				
Risk Free Rate				2,36%
Tax rate				32,59%
Country Risk Premium (Default Spread)				0,53%
Pre-tax cost of Debt				2,89%
After Tax Cost of Debt				1,95%

Cost of equity				
	France	Spain	Europe	Africa and Middle East
Risk Free Rate				2,36%
Beta Unlevered				0,474
Beta Levered				0,957
Equity Risk Premium				7,78%
Regional Cost of Equity	5,75%	7,43%	7,78%	14,73%
% of Revenues	7,82%	9,41%	9,74%	16,34%
% of Revenues	50,13%	12,96%	17,64%	19,28%
Cost of Equity				10,01%

Cost of equity		
Equity/EV		0,3980
Debt/Equity		1,5126
Debt/EV		0,6020
WACC		5,15%

Source: Aswath Damodaran 's Website/Databases and Own Estimates

Next, the cost of equity is determined as a weighted average of the revenues split by region, recognizing that different economies require different rates of return. The calculation is done using the CAPM model, with the unlevered beta for Orange's industry, Telecom Services (0.47), obtained from Professor Aswath Damodaran's datasets and levered using the Debt-to- Equity ratio based on FY 2022 values. The equity risk premium for each corresponding region, also from Professor Aswath Damodaran's datasets (Appendix 9), is multiplied by the beta and added to the risk-free rate to arrive at the region's cost of equity. The overall cost of equity for the firm is estimated to be 10.01%.

To arrive at the cost of capital (WACC), the debt and equity are weighted relative to the total enterprise value. With an Equity to EV of 39.8% and Debt to EV of 60.20%, the resulting cost of capital is 5.15% (Table 10).

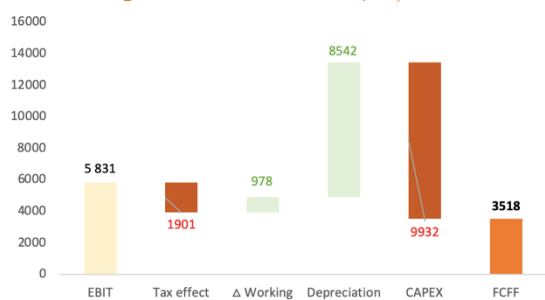
Table 11 – Alternative Beta using Peers

Company	Beta	Total Debt	Equity	Debt/Equity	Margin Tax Rate	Unlevered Beta
Deutsche Telekom	0,57	148164	48558	3,05	0,18	0,16
Vodafone	0,47	8911	2583	3,45	0,04	0,11
Orange	0,13	48076	31784	1,51	0,33	0,06
Telefonica ES	0,73	45388	25088	1,81	0,22	0,30
KORE Group Holdings, Inc.	2,81	421	181	2,33	0,03	0,86
Celtnex Telecom	0,70	20969	14221	1,47	0,38	0,37
BT Group PLC	0,80			1,06	0,10	0,41
Millicom	0,96	7820	3605	2,17	0,93	0,84
Average						0,47

Source: Refinitiv Eikon and Own Calculations

Although it was not subsequently used as a reference, an alternative WACC was also calculated by me based on seven companies comparable to Orange. For this purpose, the formula containing the beta, debt, equity, and tax margin of each of these companies was applied. After averaging the unlevered beta of each company, an unlevered beta of 0.47 was achieved (Table 11). Since this value was quite similar to the average of 49 Telecom Services companies, the value I used for the WACC calculation was 0.47 (following Damodaran's assumptions).

Figure 39 – EBIT to FCFF (M€)



Source: Own Calculations

The next step in the valuation process is estimating the Free Cash Flow to the Firm (FCFF), which measures the cash flows that both debt holders and shareholders are entitled to. The FCFF is calculated by adding back the depreciation to the after-tax operating profit and then subtracting the change in working capital and the capital expenses, which are both indicators of reinvestment in the company:

This process is represented by the waterfall in Figure 39, and is done for the defined growth period, which runs from FY 2023 to FY 2027. It is also represented on Appendix 10 the construction of FCFF for all the years from 2017 until 2027.

The Terminal Value is the present value of future cash flows beyond the defined growth period, i.e., from FY 2028 and beyond. The Terminal Value is calculated by applying a perpetual growth formula to the FCFF of FY 2027, using the WACC as a discount rate and a growth rate for the perpetuity cash flows. The growth factor is estimated using the resulting methodology from Revenues, with the long-term target resulting from the average of the annual growth rate estimated from the period 2023-2027: 1.205%. To arrive to the Enterprise Value (EV) of 76,793 M€ (Appendix 11) I discounted the FCFF to the cost of capital in each year, starting in Year 2024. In the last year- 2027 the value of FCFF was then added to the Terminal Value, and then discounted to the Cost of Capital.

To arrive at the value of Net Debt, the process was already explained above on Financial Analysis, and related to the Shares Outstanding I assumed they remained constant from 2022 onwards – 2658 Millions of Shares.

Figure 40 – Enterprise Value (M€) and Share Price €

Enterprise Value	76 793 €
Net Debt	44 991 €
Market Value of Equity (Market Cap)	31 802 €
Diluted Shares Outstanding	2 658
Share Price	11,96 €

Share Price	11,96 €
Current Price	10,60 €
Upside	12,87%

Source: Own Calculations

Based on the valuation process outlined in this text, the estimated intrinsic value of Orange is 11.96€ (Figure 40). As of today (March 9th, 2024), the market price of Orange is 10.60€ indicating that the stock is currently undervalued, with an upside of 12.87%. However, it's important to note that the final share price will depend on various factors, including market sentiment and future business performance. Nonetheless, a thorough valuation process can provide investors with a more informed perspective on the potential value of investing in Orange.

Relative Valuation

Table 12 – Orange Pricing Ratios comparison with Peers

	Deutsche Telekom	Vodafone	Telefonica ES	Swisscom	Proximus	Millicom	Orange SA
Enterprise Value	242 550	81 080	220 700	32 820	6 300	10 070	76 793
Price to Sales (P/S)	0,86		0,59	2,81	0,47	0,52	0,65
Price to Earnings per share (P/E)	17,90	2,09	13,12	15,58	7,83	67,37	20,71
Enterprise Value to Sales	1,95	1,79		2,98	1,07	1,67	1,75
Enterprise Value to EBIT	12,49	16,45		16,55	7,84	15,98	13,45
Enterprise Value to EBITDA	5,71	5,16		7,89	3,35	4,83	5,30

Source: Refinitiv Eikon and Own Calculations

Relative valuation is an alternative methodology to traditional Discounted Cash Flow (DCF) models for valuing a company. This approach uses market multiples as an indicator of how much a security is undervalued or overvalued compared to its industry peers (Table 12). The central principle of relative valuation is that assets with similar characteristics should have comparable valuations. As such, it provides a means for investors to compare a company's valuation to its industry average in a specific metric. To calculate the industry average, I used the weighted average of the total market capitalization of all peers and Orange.

Table 13 – Orange Pricing Ratios

Relative Valuation	P/E	P/Sales
Industry Average Multiple 2024	16,36	1,09
Orange SA Metric 2024	2 635	43 922
Market Cap	43 125	47 867
Implied Share price (€)	16,22	18,01
Upside - Current price	51%	67%
Upside - DCF Valuation	36%	51%

Source: Refinitiv Eikon and Own Calculations

Starting with the analysis of the comparison to the current share price, I first analyzed the Price to Sales (P/S) ratio (Table 13), which measures a company's market capitalization to its sales volume. My findings indicate that Orange undervalued by 67% when compared to the current price. Next, I examined the Price to Earnings (P/E) ratio, which measures a company's net income relative to its market capitalization.

My analysis reveals that Orange is undervalued relative to its peers by 51%. This significant price discount highlights Orange's superior ability to convert sales into net profits, making it an attractive investment opportunity for all types of investors – both debt holders and shareholders.

Table 14 – Orange EV Ratios

Relative Valuation	EV/EBITDA	EV/EBIT	EV/Sales
Industry Average Multiple 2024	5,87	13,73	2,04
Orange SA Metric 2024	14 494	5 710	43 922
Enterprise Value	85 042	78 407	89 609
Market Cap.	40 050	33 416	44 618
Implied Share price (€)	15,07	12,57	16,79
Upside - Current price	40%	17%	56%
Upside - DCF Valuation	26%	5%	40%

Source: Refinitiv Eikon and Own Calculations

Figure 41 – Relative Valuation with DCF and current price



Source: Own Calculations

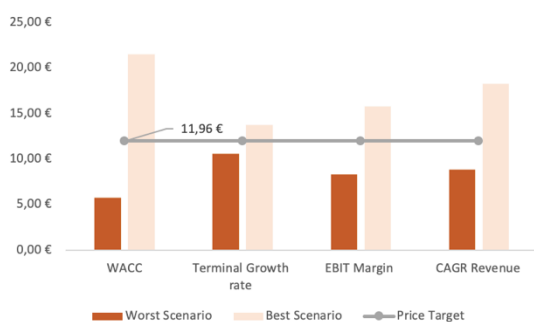
Moving on to Enterprise Value (EV) ratios (Table 14), I examined the EV to Sales (EV/S) ratio, which, similar to the P/S ratio, compares a company's enterprise value to its sales volume. Orange was found to be undervalued by 56%, which is lower than the previous metric. This finding suggests that the market values the equity of Orange more highly than its overall enterprise value, likely due to factors such as growth prospects, brand strength, or a competitive advantage in the market. In addition, I analyzed the EV/EBIT and EV/EBITDA ratios. My results indicate that Orange is undervalued by 17% and 40%, respectively, further supporting the conclusion that Orange is undervalued relative to its peers.

Moving on to the analysis of the Discounted Cashflow Valuation (Figure 41), Orange is still undervalued in every metric, but with a much smaller difference. Nevertheless, the metrics still show a considerable discrepancy, except for EV/EBIT, which is undervalued by only 5%.

Overall, Orange has been evaluated as undervalued according to all possible metrics, which indicates clearly a similar conclusion when compared to DCF Valuation, which clearly sets a **buy** investment recommendation to all investors.

Sensitivity Analysis

Figure 42 – Different Scenarios for 4 variables



Source: Own Calculations

In this section, I aim to further refine the valuation process by testing the sensitivity of Orange stock price to the assumptions made thus far. Specifically, I examine the impact of variations in both growth rates, margin levels and discount rates on the final share price. The tests are conducted to provide a more comprehensive analysis of the underlying risk factors inherent in Orange's operations and market environment. As such, the outcomes of these tests will serve as critical inputs in the formulation of informed investment decisions. The results of these tests are presented in Figure 42.

In order to assess the sensitivity of Orange's stock price to the underlying assumptions of the valuation process, 4 tests were conducted. The first test (Figure 43) varied the terminal growth and the Cost of Capital by 10%. In the second test (Figure 44), the defined period CAGR in Revenues was varied by 10%, with the Cost of Capital also varying by 10%. The third test (Figure 45) assessed the impact of varying the defined period CAGR in Revenues by 10% against the terminal growth, which was also varied by 10%. Lastly, the fifth test (Figure 46) compared the impact of varying the EBIT Margin by 5% against the terminal growth rate, that varying by 10%.

WACC- TERMINAL GROWTH RATE

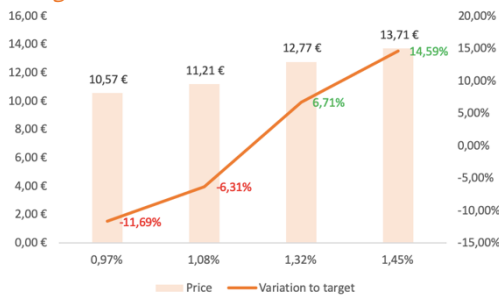
Figure 43 – Test 1 of Sensitivity Analysis

Share Price		Terminal Growth Rate				
WACC		0,97%	1,08%	1,20%	1,32%	1,45%
	4,18%	18,94	20,08	21,44	22,91	24,69
	4,64%	14,42	15,27	16,28	17,36	18,65
	5,15%	10,57	11,21	11,96	12,77	13,71
	5,67%	7,56	8,06	8,64	9,26	9,98
	6,24%	4,93	5,32	5,78	6,25	6,81

Source: Own Calculations

Analyzing the Figure 45, it becomes clear that the WACC (Weighted Average Cost of Capital) is the variable that exhibits the greatest impact on the Orange stock price level when compared to the terminal growth rate. Specifically, when we vary the WACC from the best to the worst-case scenario, the stock price shows a positive change of 79.20% and a negative change of 51.71% compared to the base scenario, resulting in a total variation of 130.90%. This impact is more pronounced in scenarios with lower growth rates, in the terminal growth test its peak variation is 132.61%, a little bit more pronounced then when compared to higher growth scenarios that have a maximum variation of 130.40%.

Figure 44 – Terminal Growth rate variation



Source: Own Calculations

The other variable that presents a significant impact on Orange share price is the terminal growth. In particular, it is observed that the variation in this variable, ranging from +20% to -20%, has a notable impact on the stock's final valuation. Specifically, the total fluctuation in regard to the base case amounts to 14.59% upwards and 11.69% downwards, respectively, corresponding to a total variation of 26.28% (Figure 44).

Notably, this impact is more pronounced in the "higher WACC" scenarios, where it reaches 32.44%, compared to the "lower WACC" scenarios, where it only reaches 26.78%. Therefore, the sensitivity analysis reveals that the terminal growth variable is also a crucial determinant of Orange's share price.

It is also noteworthy that when the WACC is at its minimum (4.18%) and the terminal growth rate is at its maximum (1.45%), the stock price reaches its highest possible level at €24.69 (106.32% above the predicted base scenario). Conversely, in the opposite scenario, the lowest price can reach €4.93 (-58.78% compared to the base scenario).

WACC- CAGR for Revenues

Figure 45 – Test 2 of Sensitivity Analysis

Share Price		CAGR Revenue				
WACC		0,82%	0,91%	1,01%	1,11%	1,23%
	4,18%	17,31	20,46	21,44	26,13	29,82
	4,64%	12,70	15,42	16,28	20,32	23,52
	5,15%	8,84	11,20	11,96	15,46	18,24
	5,67%	5,87	7,96	8,64	11,73	14,19
	6,24%	3,31	5,16	5,78	8,50	10,69

Source: Own Calculations

Evaluating the defined Compound Annual Growth Rate (CAGR) for Revenues, the analysis indicates that its variation from the best, +20%, to the worst, -20%, results in a total fluctuation of 78% concerning the base case, with a 52.49% increase and a 26.12% decrease. Importantly, the impact becomes more pronounced in the "higher WACC" scenarios, reaching 127.73%, compared to the "lower WACC" scenarios, where it only reaches 58.35%.

When applying a WACC that is 20% lower and a CAGR Revenue Growth that is 20% higher than the base scenario, we arrive at the highest stock price among all the tests: €29.82 - approximately 149.26% higher than the price predicted by the DCF Valuation.

Figure 46 – Test 3 of Sensitivity Analysis

WACC- EBIT Margin

Share Price		EBIT MARGIN				
WACC		11,73%	12,35%	13,00%	13,65%	14,33%
	4,18%	16,63	18,97	21,44	23,91	26,50
	4,64%	12,12	14,15	16,28	18,41	20,65
	5,15%	8,35	10,11	11,96	13,82	15,77
	5,67%	5,44	7,00	8,64	10,29	12,01
	6,24%	2,94	4,32	5,78	7,23	8,76

Source: Own Calculations

The analysis referent to EBIT Margin reveals that its variation from the best, +10%, to the worst, -10% causes a total fluctuation of 62.04% in regard to the best case, with 31.79% upwards and 30.24% downwards. This relationship shows that the peak variation is guaranteed when the lowest the terminal growth rate and the lowest the EBIT Margin. Then so, the higher will be the impact on Orange Share price- 66.24% and 32.57%, respectively. When we are comparing to the WACC, the peak variation happens when the EBIT Margin is the lowest- 164.06% and when the WACC is the highest- 100.85%.

Figure 47 – Test 4 of Sensitivity Analysis

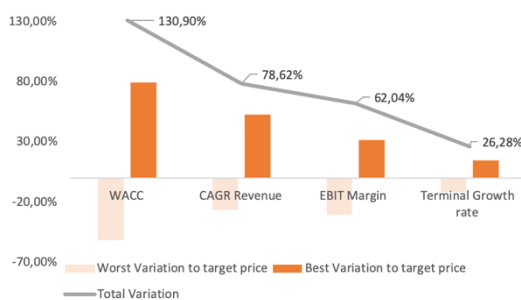
Terminal Growth- CAGR Revenue

Share Price		CAGR Revenue				
Terminal Growth		0,82%	0,91%	1,01%	1,11%	1,23%
	0,97%	7,59	9,84	10,57	13,89	16,54
	1,08%	8,16	10,47	11,21	14,61	17,32
	1,20%	8,84	11,20	11,96	15,46	18,24
	1,32%	9,56	11,99	12,77	16,37	19,23
	1,45%	10,40	12,91	13,71	17,43	20,38

Source: Own Calculations

In regard to the long-term and short-term growth test, the observed impact on the share price across all combinations exhibits less variability than the previously mentioned tests, apart from the EBIT margin- terminal Growth test. The defined CAGR Revenues variable still contributes a noticeable impact, with fluctuations ranging between 72.78% in the “higher growth” environment and 84.68% in the “lower growth” scenario. The terminal growth variable exhibits much less significant impact on share price, with fluctuations ranging from 31.82% in the “lower growth” scenario to 21.06% in the “higher growth” scenario.

Figure 48 – Impact of the Variables on Share Price



Source: Own Calculations

In conclusion, the sensitivity analysis performed in this study indicates that WACC is the variable with the greatest impact on the share price of Orange, followed by defined period CAGR, EBIT margin and lastly terminal growth rate (Figure 48). The impact of these variables on the share price is higher in the scenarios with higher WACC and lower growth rates. The lowest recorded price in these tests – 2.94€ – is 72.29% lower than the current share price (10.60€) and 75.45% lower than my base case, while the best-case scenario – 29.82€ – shows an incredible 181.35% increase in share price compared to the current price and a 149.26% increase compared to my base case.

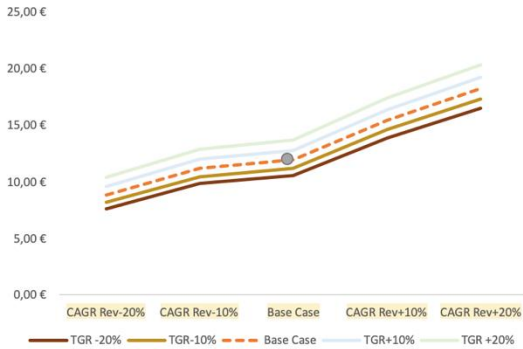
Investment Risks

Economic Risks | ER Innovation & Competition (ER1)

Probability: LOW | Impact: MODERATE

In recent times, the telecom industry has been constantly marked by an intense competition and continuous technological advances, a trend that is expected to increase even further in the upcoming years. Orange, like any other company in the sector, thus faces the risk of being at a clear disadvantage compared to its direct competitors in terms of technological innovation. That being said, failing to remain at the vanguard of technological trends could eventually result in a loss of market share, decreased revenue and, above all, decreased profitability for Orange.

Figure 49 – Test 4 Visualization



Source: Own Calculations

As in other areas, the industry landscape is characterized by both well-established competitors and new emerging entrants, that could result in a potential threat of pressure on prices and impacting overall profitability.

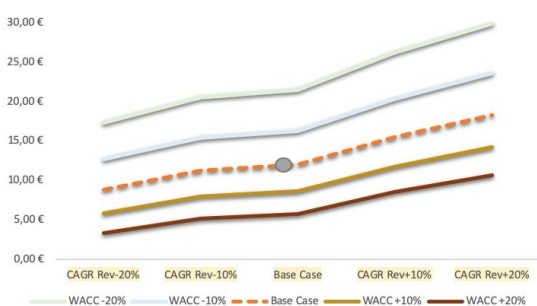
These events would lead to a scenario similar to the one explored in test 4 of sensitivity analysis, where both the medium and long-term profitability are put into question. In Figure 49, the maximum impact of a loss 20% in the medium and long-term growth rate is -36.58% on share price (compared to the base-case scenario)- 7.59€, and in the opposite, a 20% gain in both medium and long-term growth would result in a price of 20.38€– 70.33% above target price.

Geopolitical Risk (ER2)

Probability: LOW | Impact: HIGH

Orange faces geopolitical risks that arise from changes in government policy, trade dynamics, or security threats, one of them being the potential impact of protectionist measures on its business activities in certain markets. For example, shifts in visa regulations, could influence Orange's ability to provide telecom services in certain regions, with a direct negative impact on revenue streams and profitability. Moreover, trade barriers and restrictions may interfere with Orange's cross-border operations and affect the mobility of services.

Figure 50 – Test 2 Visualization

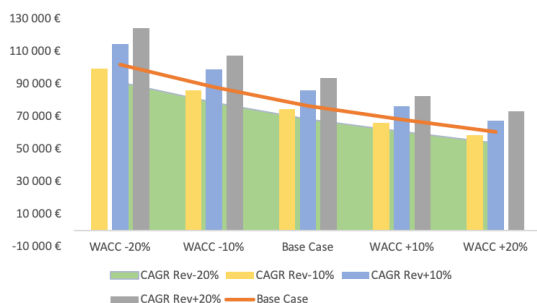


Source: Own Calculations

Geopolitical risks can also be regarded when looking at security threats, such as cyber-attacks, which can threaten Orange's operations and reputation, in the sense that it could lead to data loss, legal complications, and reputational damage. Like we have been experiencing in recent times, with examples like Covid or the Russian War, political instability and conflicts in various countries can represent additional geopolitical risks for Orange, impacting the ability to operate in them markets. These types of conflicts also have the capacity to disrupt the company's supply chain, and then affect its ability to deliver good services to customers. Such a scenario is observable in test 2 of sensitivity analysis, where both the cost of capital and the medium-term profitability are affected. In Figure 50, the maximum impact of a 20% increase in the cost of capital and a loss in 20% profitability is -72.37% on share price- 3.31€

(compared to base-case scenario), and the other way around that can be said that is a potential for a share price of 29.82€ (149.26% higher than price target), clearly indicating the huge potential both variables can have on the Valuation process.

Figure 51 – Impact of WACC and CAGR Revenue on Firm Value



Source: Own Calculations

Taxation Risk (ER3)

Probability: LOW | Impact: MODERATE

Orange is confronted with tax risks, that mainly relate to fluctuations in tax rates and policies. That way, changes in tax policies represent an important part of taxation risk, because such changes can seriously impact compliance requirements and boost managerial duties. To add to that, alterations in tax policy can affect Orange's competitiveness in certain markets, as local companies might be with a competitive advantage due to the offered tax incentives or exemptions.

Taxation risk also has the potential for tax disputes or audits, meaning the possibility of additional tax liabilities or legal costs for the company. The judgment of certain tax laws by different tax authorities could then generate controversies on owed taxes, causing potential challenges for the company. The impact of this risk can be proxied to test 2 of sensitivity analysis.

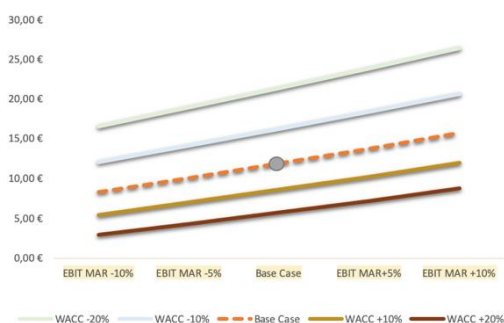
In Figure 51, we can perceive the impact that both the cost of capital and the defined CAGR in Revenues can have on the Firm Value. Analyzing the graphic, when a 20% decrease in the WACC and a 20% increase in the profitability are applied we reach a maximum for Firm Value of 124.261 M€, around 62% higher compared to base case. On the other hand, the higher the WACC and the lower the CAGR for Revenues, the lower will be the Firm value, which can drop to 53,779 M€, being around -30% lower than base case.

Financial Risks | Interest Rate Risk (FR1)

Probability: MODERATE | Impact: MODERATE

Orange is exposed to interest rate risks, particularly concerning changes in borrowing costs, as it may need to borrow funds for various purposes, them being financing operations or investing in new technologies. Deviations in interest rates can seriously impact the cost of borrowing for Orange, which could translate into potential changes in interest expenses and influencing overall profitability. Another area of interest rate risk for Orange could be seen in the potential impact on the cost of capital (here WACC), as it can influence the company's ability to raise funds through equity or debt financing and then affecting Orange's capacity to make strategic investments in growth opportunities or distribute value to its shareholders.

Figure 52 – Test 3 Visualization



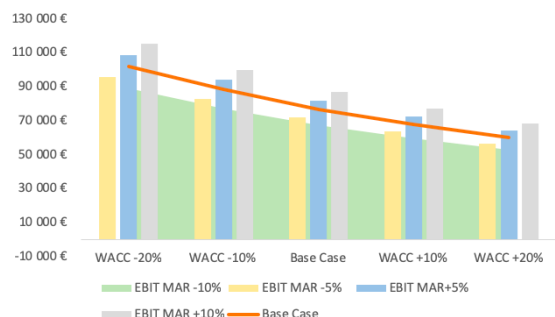
Source: Own Calculations

In Figure 52, when varying both the cost of capital and the EBIT Margin, a minimum of 2.94€ and a maximum of 26.50€ can be reached, making that a total variation of around 197% between the 2 extremes, when compared to the base case scenario.

Derived to the facts mentioned before, it is very important for Orange to explore these interest rate dynamics to maintain a balance between financial costs, capital structure, and service demand. This can be observed in both test 1 (Figure 43),2 (Figure 44) and 3

(Figure 45) of sensitivity analysis, in the WACC axis, where the maximum impact of a 12% increase in the cost of capital is -51.71% on share price (compared to base- case scenario).

Figure 53 – Impact of WACC and EBIT Margin on Firm Value



Source: Own Calculations

As rapid currency devaluations can result in higher expenses and so creating a significant impact in profit margins, the company may need to implement strategies such as currency hedging to mitigate the risks associated with these fluctuations.

Moreover, as Orange engages in international financial transactions and investments, changes in exchange rates can also influence assets and liabilities valuations. This may contribute to gains or losses on the company's balance sheet, creating an impact on its overall financial position.

Its effects can be observed in Figure 53, with the variation of both EBIT Margin and the cost of capital clearly impacting the Firm Value. If the impact of a maximum 20% increase in the EBIT Margin and 20% decrease in the WACC is applied, the Firm Value will reach around 115.419 M€, 50% higher than the base case of 76.793M€. Even though the negative impact of the combination of these variables is still significant, around 30%, the positive impact still has a greater weight on the share price.

Foreign Exchange Risk (FR2)

Probability: HIGH | Impact: MODERATE

Orange is exposed to significant currency exchange rate fluctuations- operating in 28 countries- and because of that is vulnerable to changes in exchange rates between them currencies.

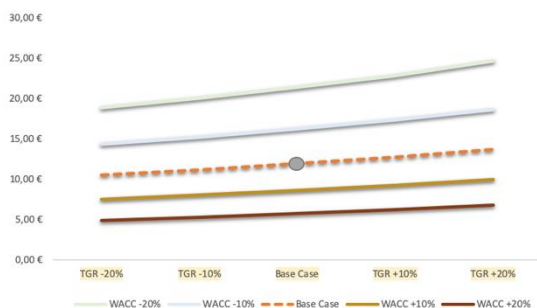
One very important aspect affected by currency exchange rate fluctuations is related to revenue, and since Orange generates revenue in different currencies, changes in exchange rates can lead to discrepancies in the reported revenue when converted into the company's reporting currency. This can set up some challenges in precisely assessing the company's financial health and performance.

Inflation Risk (FR3)

Probability: HIGH | Impact: HIGH

As one of the largest telecommunications companies in the world, Orange faces inflation risks that can manifest in many ways, them being for example increased input costs, higher wage inflation or even potential price pressure from customers. A potential problem for Orange could be the cost of inputs such as raw materials, network infrastructure or technology licenses, in a sense that these rising operating costs can translate into lower profit margins for the company. Another aspect to bear in mind is related to wage inflation in different countries, potentially a cause of another inflation risk for Orange. In Figure 54, these impacts can be comparable to test 1 of sensitivity analysis, where both the cost of capital and the terminal growth rate are affected. The maximum impact of a 20% increase in the cost of capital and a loss of 20% in the TGR is -58.78% (compared to base case scenario).

Figure 54 – Test 1 Visualization



Source: Own Calculations

Figure 55 – Investment Risks Matrix

IMPACT		Low			Moderate			High		
P R O B A B I L I T Y	Low				ER1					
					ER3			ER2		
	Moderate	RL1			FR1					
	High				FR2					FR3

Source: Own Estimates

Furthermore, as we are currently in times of rising inflation, Orange faces potential price pressure from customers as they may try to negotiate lower prices in order to control their own costs, which poses a huge challenge in terms of sustainability of profitability. In addition, inflation may contribute to changes in customer preferences and demand, as they may shift their spending to essential or high-value telecom services or even postpone their investments in information and communication technologies. To try to avoid this, Orange must proactively address these dynamics in order to adapt to a constantly changing customer behavior and maintain its competitive position in the industry (Figure 55).

Regulatory and Legal Risks | RL

Probability: MODERATE | Impact: LOW

Orange, as a global telecom company, is subject to a bundle of regulations, such as, data privacy laws, telecom regulations, labor laws, and other legal frameworks regarding the telecom industry. Non-compliance with these regulations can expedite fines, legal repercussions, and damage to the company's reputation.

In recent years, the telecom sector is under increasing analysis all over the world, especially in areas related to cybersecurity or even data protection. Violations of these regulations can translate in substantial costs and legal obligations, that being the reason why Orange has implemented a strong obedience and governance measures to address that risks.

To conclude it needs to be explained that the company places a strong emphasis on ethical practices and compliance, enduring dedicated teams to assure attachment to the diverse regulatory panorama across all its operational countries.

Appendixes

Appendix 1: History of Orange SA

2024	Paris 2024: Orange, Premium Partner and Official Supplier
2020	Launch of TOTEM, our European TowerCo, marking the acceleration of our strategy towards optimization, development, and increasing the value of our mobile assets
2018	Orange Money celebrates its 10th anniversary: launched in 2008, the service now has 29.1 million customers in 17 countries
2017	Orange Cyberdefense is inaugurated along with Orange Bank, the 100% mobile banking offer in France
2006	Orange becomes the single brand for mobile, TV, Internet and digital services in our main markets

2003	Orange is the first operator in France to launch TV over ADSL, with the first TV set-top box, and TV over mobile
2000	Acquisition of Orange to broaden the Group's international appeal
1996	Launch of Wanadoo: Internet for all
1994	Launch of Orange in the United Kingdom, which revolutionizes the market, in particular with per-second billing

Source: Orange Annual Report 2022

Appendix 2: Board of Directors



Christel Heydemann,
Chief Executive Officer



Jean-François Fallacher,
Executive Vice President, CEO of Orange France



Hugues Foulon,
Executive Vice President, CEO of Orange Cyberdefense



Jérôme Hénique,
Executive Vice President, CEO of Orange Middle East and Africa (OMEA)



Mari-Noëlle Jégo-Laveissière,
Executive Vice President, CEO of Orange in Europe (outside France)



Michaël Trabbia,
Executive Vice President, CEO of Orange Wholesale, and Chief Technology and Innovation Officer*



Fabienne Dulac,
Executive Vice President Transformation



Alette Mousnier-Lompré,
Executive Vice President, CEO of Orange Business



Caroline Guillaumin,
Executive Vice President Communication



Nicolas Guérin,
Secretary-General for the Group and Secretary of the Board of Directors



Vincent Lecerf,
Executive Vice President Human Resources



Élisabeth Tchoungui,
Executive Vice President Corporate Social Responsibility



Jean-Michel Thibaud,
Interim Executive Vice President Finance, Performance and Development**

Source: Orange Annual Report 2022

Appendix 3: Environmental Segments

	2022	2021	2020	2019	2018
Total Energy Use / Million in Revenue \$	432.87	399.18	381.31	423.42	432.21
Energy Use Total	20,138,400.00	19,296,000.00	19,684,800.00	20,048,400.00	20,512,800.00
Energy Purchased Direct	19,706,400.00	17,974,800.00	19,195,200.00	19,828,800.00	20,512,800.00
Energy Produced Direct	432,000.00	579,600.00	489,600.00	219,600.00	--
Indirect Energy Use	--	--	--	--	--
Electricity Purchased	16,938,000.00	15,501,600.00	15,094,800.00	15,562,800.00	15,685,200.00
Electricity Produced	432,000.00	579,600.00	489,600.00	219,600.00	--
Grid Loss Percentage	--	--	--	--	--
Renewable Energy Use Ratio	14.44%	11.96%	8.92%	8.66%	9.23%
Renewable Energy Supply	--	--	--	--	--
Total Renewable Energy To Energy Use in million	165,892.03	149,626.87	114,118.51	97,504.04	92,313.09
Total Renewable Energy	3,340,800.00	2,887,200.00	2,246,400.00	1,954,800.00	1,893,600.00
Renewable Energy Purchased	2,908,800.00	2,307,600.00	1,756,800.00	1,735,200.00	1,893,600.00
Renewable Energy Produced	432,000.00	579,600.00	489,600.00	219,600.00	--
Renewable Energy Use	TRUE	TRUE	TRUE	TRUE	TRUE
Cement Energy Use	--	--	--	--	--
Coal Produced (Raw Material in Tonnes), Total	--	--	--	--	--
Green Buildings	TRUE	TRUE	TRUE	TRUE	TRUE
Total Water Use / Million in Revenue \$	23.28	15.34	17.65	14.94	23.32
Water Withdrawal Total	1,082,950.00	741,289.00	911,094.00	707,308.00	1,106,883.00
Fresh Water Withdrawal Total	1,082,950.00	741,289.00	911,094.00	707,308.00	1,106,883.00
Total Water Use / Million in Revenue \$	23.28	15.34	17.65	14.94	23.32
Water Withdrawal Total	1,082,950.00	741,289.00	911,094.00	707,308.00	1,106,883.00
Fresh Water Withdrawal Total	1,082,950.00	741,289.00	911,094.00	707,308.00	1,106,883.00
Emission Reduction Target Percentage	30.00%	30.00%	30.00%	30.00%	50.00%
Emission Reduction Target Year	2025	2025	2025	2025	2020
Biodiversity Impact Reduction	TRUE	TRUE	TRUE	TRUE	TRUE
Estimated CO2 Equivalents Emission Total	1,466,080.00	1,409,680.00	1,273,080.00	1,302,681.00	1,376,834.00
CO2 Estimation Method	Reported	Reported	Reported	Reported	Reported
Total CO2 Emissions / Million in Revenue \$	31.51	29.16	24.66	27.51	29.01
CO2 Equivalent Emissions Total	1,466,083.00	1,409,684.00	1,273,080.00	1,302,681.00	1,376,834.00
CO2 Equivalent Emissions Direct, Scope 1	335,654.00	321,886.00	282,526.00	295,636.00	333,690.00
CO2 Equivalent Emissions Indirect, Scope 2	1,130,929.00	1,087,798.00	990,554.00	1,007,045.00	1,043,144.00
CO2 Equivalent Emissions Indirect, Scope 3 To Revenues	--	125.61	115.82	131.43	123.16
CO2 Equivalent Emissions Indirect, Scope 3	--	6,072,000.00	5,979,000.00	6,223,000.00	5,845,000.00
Total Waste / Million in Revenue \$	1.23	1.09	1.07	1.00	1.04
Waste Recycled To Total Waste	85.50%	87.20%	88.50%	84.50%	83.00%
Total Hazardous Waste / Million in Revenue \$	0.58	0.57	0.55	0.47	0.48
Waste Total	57,205.00	52,534.00	55,392.00	47,447.00	49,533.00
Non-Hazardous Waste	30,102.00	25,182.00	26,882.00	25,022.00	26,759.00
Waste Recycled Total	48,910.28	45,809.65	49,021.92	40,092.71	41,112.39
Waste Recycling Ratio	85.50%	87.20%	88.50%	84.50%	83.00%
Hazardous Waste	27,103.00	27,352.00	28,510.00	22,425.00	22,774.00
Upstream scope 3 emissions Purchased goods and servic	--	3,034,000.00	3,004,000.00	3,277,000.00	3,360,000.00
Upstream scope 3 emissions Capital goods	--	1,884,000.00	1,839,000.00	1,749,000.00	1,350,000.00
Upstream scope 3 emissions Fuel- and Energy-related Ac	--	357,000.00	352,000.00	315,000.00	351,000.00
Upstream scope 3 emissions Transportation and Distrib	--	62,000.00	62,000.00	66,000.00	69,000.00
Upstream scope 3 emissions Waste Generated in Operat	--	34,000.00	30,000.00	33,000.00	36,000.00
Upstream scope 3 emissions Business Travel	--	6,000.00	11,000.00	38,000.00	35,000.00
Upstream scope 3 emissions Employee Commuting	--	128,000.00	139,000.00	143,000.00	146,000.00
Upstream scope 3 emissions Leased Assets	--	--	--	--	--
Downstream scope 3 emissions Transportation and Distr	--	12,000.00	14,000.00	14,000.00	14,000.00
Downstream scope 3 emissions Processing of Sold Produ	--	--	--	--	--
Downstream scope 3 emissions Use of Sold Products	--	555,000.00	528,000.00	588,000.00	484,000.00
GHG Emissions Intensity Scope 1,2 and 3 YoY Chg	--	14.30	-18.46	6.77	124.00
GHG Emissions Scope 1,2,3 Paris Agreement Aligned	--	FALSE	FALSE	FALSE	FALSE
GHG Emissions Scope 1,2 Paris Agreement Aligned	FALSE	FALSE	FALSE	FALSE	FALSE
GHG Emissions Intensity Scope 1,2,3 Paris Agreement Al	--	FALSE	TRUE	FALSE	FALSE
GHG Emissions Intensity Scope 1,2 Paris Agreement Alig	FALSE	FALSE	TRUE	FALSE	FALSE
GHG Emissions Scope 1,2,3 - 3 year CAGR	--	0.04	4.25	4.13	3.94
GHG Emissions Scope 1,2,3 - 5 year CAGR	--	4.10	3.96	4.24	3.80
GHG Emissions Intensity Scope 1,2,3 - 3 year CAGR	--	0.02	3.99	3.66	3.55
GHG Emissions Intensity Scope 1,2,3 - 5 year CAGR	--	3.54	3.20	4.28	4.70
GHG Emissions Intensity Indirect, Scope 3 YoY Percent C	--	8.46	-11.88	6.72	12,732.30
GHG Emissions Direct, Scope 1 to Revenue USD in millio	7.21	6.66	5.47	6.24	7.03
GHG Emissions Direct, Scope 1 - 3 year CAGR	0.14	-0.04	-0.15	-0.09	-0.02
GHG Emissions Direct, Scope 1 - 5 year CAGR	0.01	-0.01	-0.17	-0.15	-0.20
GHG Emissions Intensity Scope 1 - 3 year CAGR	0.16	-0.05	-0.19	-0.17	-0.10
GHG Emissions Intensity Scope 1 - 5 year CAGR	0.07	-0.12	-0.30	-0.14	-0.05
GHG Emissions Indirect, Scope 2 to Revenue USD in milli	24.31	22.50	19.19	21.27	21.98
GHG Emissions Indirect, Scope 2 - 3 year CAGR	0.12	0.04	-0.01	-0.08	-0.03
GHG Emissions Indirect, Scope 2 - 5 year CAGR	0.13	-0.01	-0.08	-0.04	0.00
GHG Emissions Intensity Scope 2 - 3 year CAGR	0.14	0.02	-0.06	-0.16	-0.11
GHG Emissions Intensity Scope 2 - 5 year CAGR	0.19	-0.12	-0.22	-0.03	0.19
Total CO2 Equivalent Emissions To Million Revenues USD	0.08	0.18	-0.10	-0.05	0.07
CO2 Equivalent Emissions Total YoY	4.00	10.73	-2.27	-5.39	3.24
CO2 Equivalent Emissions Direct Scope 1 YoY	4.28	13.93	-4.43	-11.40	0.58
CO2 Equivalent Emissions Indirect Scope 2 YoY	3.96	9.82	-1.64	-3.46	4.12
Cement CO2 Equivalents Emission YoY	--	--	--	--	--
CO2 Equivalent Emissions Indirect Scope 3 YoY	--	1.56	-3.92	6.47	12,325.30
Fleet CO2 Emissions YoY	--	--	--	--	--
Total CO2 Equivalent Emissions To Million Revenues USD	4.63	0.17	-3.23	-5.88	-3.68

Source: Refinitiv Eikon

Appendix 4: Social Segments

	2022	2021	2020	2019	2018
Salaries and Wages from CSR reporting	€7,958,234,760.00	€7,563,808,512.00	€7,519,166,400.00	€7,633,110,144.00	--
Net Employment Creation	-1.28%	-1.33%	-1.35%	-0.24%	-1.52%
Number of Employees from CSR reporting	136,430	139,698	142,150	146,768	150,711
Trade Union Representation	--	--	--	71.70%	75.40%
Average Employee Length of Service	--	--	--	--	--
Turnover of Employees	10.82%	10.42%	8.62%	10.36%	9.97%
Voluntary Turnover of Employees	10.24	9.67	8.03	4.11	3.70
Involuntary Turnover of Employees	0.56	0.74	0.59	6.12	6.27
Announced Layoffs To Total Employees	0.00%	0.00%	0.00%	0.00%	0.00%
Announced Layoffs	--	--	--	--	--
Gender Pay Gap Percentage	--	--	--	--	--
Women Employees	36.10%	35.90%	36.00%	36.00%	36.10%
New Women Employees	37.00%	32.50%	--	61.59%	50.00%
Women Managers	33.10%	31.60%	31.10%	29.80%	29.80%
HRC Corporate Equality Index	--	--	--	--	--
Flexible Working Hours	TRUE	TRUE	TRUE	TRUE	TRUE
Day Care Services	FALSE	FALSE	FALSE	FALSE	FALSE
Employees With Disabilities	--	--	3.34%	3.58%	3.60%
Employee Health & Safety Training Hours	--	--	--	--	--
Injuries To Million Hours	2.28	2.21	2.13	3.62	3.33
Total Injury Rate Total	2.28	2.21	2.13	3.62	3.33
Total Injury Rate Contractors	--	--	--	--	--
Total Injury Rate Employees	2.28	2.21	2.13	3.62	3.33
Accidents Total	622.00	617.00	606.00	1,063.00	1,004.00
Contractor Accidents	--	--	--	--	--
Employee Accidents	622.00	617.00	606.00	1,063.00	1,004.00
Occupational Diseases	--	--	0.10	0.21	0.20
Employee Fatalities	4	3	0	3	2
Contractor Fatalities	--	--	--	--	--
Lost Days / Million Working Days	997	991	953	1,022	1,115
Lost Time Injury Rate Total	1.98	1.94	1.75	2.37	2.43
Lost Time Injury Rate Contractors	--	--	--	--	--
Lost Time Injury Rate Employees	1.98	1.94	1.75	2.37	2.43
Lost Working Days	32,448.00	32,689.00	31,848.00	34,643.00	37,865.00
Employee Lost Working Days	32,448.00	32,689.00	31,848.00	34,643.00	37,865.00
Contractor Lost Working Days	--	--	--	--	--
HIV-AIDS Program	TRUE	TRUE	TRUE	TRUE	TRUE
Average Training Hours	20.70	22.90	17.70	26.00	26.10
Training Hours Total	2,824,101.00	2,520,000.00	1,980,000.00	2,486,312.00	3,843,048.00

Source: Refinitiv Eikon

Appendix 5: Governance Segments

Board Meeting Attendance Average	96.15%	97.20%	94.61%	90.34%	91.50%
Committee Meetings Attendance Average	93.20%	98.00%	100.00%	86.00%	88.26%
Board Structure Type	Unitary	Unitary	Unitary	Unitary	Two-tier
Board Size More Ten Less Eight	5	5	5	5	4
Board Size	--	--	--	--	--
Board Background and Skills	TRUE	TRUE	TRUE	TRUE	TRUE
Board Gender Diversity, Percent	40.00%	46.67%	40.00%	33.33%	28.57%
Board Specific Skills, Percent	16.67%	21.05%	22.22%	17.65%	18.75%
Average Board Tenure	4.99 Yrs	4.55 Yrs	4.79 Yrs	4.53 Yrs	4.17 Yrs
Non-Executive Board Members	88.89%	94.74%	94.44%	94.12%	93.75%
Independent Board Members	50.00%	36.84%	44.44%	47.06%	43.75%
Strictly Independent Board Members	--	--	--	35.29%	--
CEO Chairman Duality	TRUE	TRUE	TRUE	TRUE	TRUE
CEO Board Member	TRUE	TRUE	TRUE	TRUE	TRUE
Chairman is ex-CEO	TRUE	TRUE	TRUE	TRUE	TRUE
Board Member Affiliations	1.89	1.58	1.39	1.24	1.06
Board Individual Re-election	FALSE	FALSE	FALSE	FALSE	FALSE
Board Member Membership Limits	No Limit	No Limit	No Limit	No Limit	--
Board Member Term Duration	4.00	4.00	4.00	4.00	4.00
Executive Compensation Policy	TRUE	TRUE	TRUE	TRUE	TRUE
Executive Individual Compensation	FALSE	FALSE	FALSE	FALSE	FALSE
Total Senior Executives Compensation To Revenues in mill	€15,581,100.00	€19,874,000.00	€21,948,100.00	€19,153,028.00	€4,018,026.00
Highest Remuneration Package	\$1,141,828	\$1,744,431	\$1,978,055	\$2,115,761	\$2,039,060
CEO Compensation Link to TSR	TRUE	TRUE	TRUE	TRUE	TRUE
Executive Compensation LT Objectives	FALSE	FALSE	FALSE	FALSE	FALSE
Sustainability Compensation Incentives	TRUE	TRUE	TRUE	TRUE	TRUE
Shareholders Approval Stock Compensation Plan	TRUE	TRUE	TRUE	TRUE	TRUE
Board Member Compensation	\$1,518,507	\$1,280,048	\$1,284,649	\$725,256	\$1,114,460
Board Member LT Compensation Incentives	--	--	0.00	0.00	0.00
Board Cultural Diversity, Percent	--	--	--	--	--
Executive Members Gender Diversity, Percent	50.00%	28.57%	26.67%	35.29%	37.50%

Source: Refinitiv Eikon

Appendix 6: Balance Sheet

Balance Sheet in million €	Year2015	Year2016	Year2017	Year2018	Year2019	Year2020	Year2021	Year2022	Year2023F	Year2024F	Year2025F	Year2026F	Year2027F
Intangible assets	14 327	14 602	14 339	14 073	14 737	15 135	14 940	14 946	15 373	15 544	15 731	15 934	16 154
Property, plant and equipment	25 123	25 912	26 665	27 693	35 123	36 084	38 186	39 576	41 182	42 854	44 594	46 404	48 287
Long Term Investments	969	3 997	3 788	3 962	2 500	2 780	3 208	3 081	3 112	3 143	3 174	3 206	3 238
Other non-current investments	36 699	30 308	28 820	28 973	29 394	28 640	25 903	25 244	25 244	25 244	25 244	25 244	25 244
Total noncurrent assets	77 118	74 819	73 612	74 701	81 754	82 639	82 237	82 847	84 911	86 785	88 743	90 788	92 923
Inventories	763	819	827	965	906	814	952	1 048	971	982	994	1 007	1 020
Trade and other current receivables	5 933	9 148	7 556	10 621	10 767	10 169	11 219	12 025	11 355	11 482	11 620	11 769	11 931
Other current assets	1 865	1 670	1 583	1 862	2 000	2 713	2 734	3 179	2 635	2 665	2 697	2 732	2 769
Cash and cash equivalents	5 751	8 212	11 771	8 443	11 314	11 398	10 929	10 551	11 561	10 766	9 981	9 208	8 450
Total current assets	14 312	19 849	21 737	21 891	24 987	25 094	25 834	26 803	26 523	25 894	25 291	24 716	24 171
Total assets	91 430	94 668	95 349	96 592	106 741	107 733	108 071	109 650	111 433	112 679	114 034	115 504	117 094
Notes Payable/Short Term Debt	934	820	1 551	1 434	361	709	1 799	1 254	1 016	1 027	1 040	1 053	1 068
Accounts Payable	6 227	6 211	6 527	6 736	6 682	6 475	6 738	7 067	6 985	7 063	7 148	7 241	7 340
Other current liabilities	14 465	18 873	20 979	22 126	20 724	21 110	18 739	20 902	22 143	22 391	22 660	22 952	23 268
Total current liabilities	21 626	25 904	29 057	30 296	27 767	28 294	27 276	29 223	30 145	30 482	30 848	31 246	31 676
Total Long Term Debt	29 528	28 753	26 293	26 490	38 741	35 964	38 618	38 831	37 596	38 016	38 474	38 969	39 506
Provisions	3 239	3 144	3 192	3 211	3 390	3 498	4 205	4 296	4 296	4 296	4 296	4 296	4 296
Other	6 130	6 179	5 832	5 926	5 118	5 582	5 631	5 516	5 526	5 636	5 756	5 885	6 025
Total non-current liabilities	38 897	38 076	35 317	35 627	47 249	45 044	48 454	48 643	47 418	47 949	48 525	49 151	49 827
Called up share capital	10 596	10 640	10 640	10 640	10 640	10 640	10 640	10 640	10 640	10 640	10 640	10 640	10 640
Reserves	16 790	16 893	16 915	16 849	16 831	16 927	16 937	16 826	22 542	21 908	21 295	20 704	20 135
Retained Earnings	3 521	-2 210	-1 851	-2 062	-1 075	1 851	-399	-313	688	1 701	2 726	3 764	4 816
Other Equity	-	5 365	5 271	5 242	5 329	4 977	5 163	4 631	4 538	4 448	4 359	4 271	4 186
Shareholders' equity	30 907	30 688	30 975	30 669	31 725	34 395	32 341	31 784	33 870	34 249	34 661	35 108	35 591
Minority interests													
Total liabilities and shareholders' equity	91 430	94 668	95 349	96 592	106 741	107 733	108 071	109 650	111 433	112 679	114 034	115 504	117 094
check	0	0	0	0	0	0	0	0	0	0	0	0	0
Total liabilities	60 523	63 980	64 374	65 923	75 016	73 338	75 730	77 866	77 563	78 430	79 373	80 396	81 503

Source: Own Calculations

Appendix 7: Income Statement

Income Statement in million €	Year2015	Year2016	Year2017	Year2018	Year2019	Year2020	Year2021	Year2022	Year2023F	Year2024F	Year2025F	Year2026F	Year2027F
Revenues	40 236	40 918	40 859	41 381	42 238	42 270	42 522	43 471	43 922	44 413	44 947	45 526	46 153
Cost of sales	16 534	17 125	17 233	17 382	16 796	16 804	17 043	17 794	18 008	18 209	18 428	18 666	18 923
Gross profit	23 702	23 793	23 626	23 999	25 442	25 466	25 479	25 677	25 914	26 204	26 519	26 860	27 230
SG&A	11 978	12 105	11 819	12 372	11 670	11 653	11 710	11 957	12 298	12 436	12 585	12 747	12 923
R&D	134	-431	-455	-362	-563	-435	-551	-654	-878	-888	-899	-911	-923
EBITDA	11 590	12 119	12 262	11 989	14 335	14 248	14 320	14 374	14 494	14 656	14 832	15 024	15 230
Depreciation, Amortization	6 465	6 728	6 846	7 047	8 384	8 518	8 556	8 543	8 784	8 883	8 989	9 105	9 231
Normalized EBIT	5 125	5 391	5 416	4 942	5 951	5 730	5 764	5 831	5 710	5 774	5 843	5 918	6 000
Finance costs	383	2 067	638	113	21	209	3 243	1 030	963	963	963	963	963
Operating Income	4 742	3 324	4 778	4 829	5 930	5 521	2 521	4 801	4 747	4 811	4 880	4 955	5 037
Finance Income	(1 583)	(1 344)	(1 715)	(1 362)	(1 261)	(1 314)	(782)	(920)					
Financial Profit (Income-costs)	(1 966)	(3 411)	(2 353)	(1 475)	(1 282)	(1 523)	(4 025)	(1 950)					
Profit before taxation (EBT)	3 159	1 980	3 063	3 467	4 669	4 207	1 739	3 881	4 352	4 504	4 676	4 870	5 091
Taxation	649	970	1 052	1 309	1 447	-848	962	1 265	-1 175	-1 216	-1 262	-1 315	-1 375
Net profit from continuing operations	2 510	1 010	2 011	2 158	3 222	5 055	777	2 616	3 177	3 288	3 413	3 555	3 717
Extraordinary operations	448	2 253	29	0	0	0	0	0	0	0	0	0	0
Minority interests	-306	-328	-197	-204	-218	-233	-545	-471	-542	-623	-716	-824	-947
Net Income	2 652	2 935	1 843	1 954	3 004	4 822	232	2 145	2 635	2 665	2 697	2 732	2 769

Source: Own Calculations

Appendix 8: Ratio Analysis

Key Financials	2015	2016	2017	2018	2019	2020	2021	2022
Revenues	40 236	40 918	40 859	41 381	42 238	42 270	42 522	43 471
COGS	16 534	17 125	17 233	17 382	16 796	16 804	17 043	17 794
Gross Margin	58,91%	58,15%	57,82%	58,00%	60,23%	60,25%	59,92%	59,07%
EBITDA	11 590	12 119	12 262	11 989	14 335	14 248	14 320	14 374
Net Income	265200,00%	293500,00%	184300,00%	195400,00%	300400,00%	482200,00%	23200,00%	214500,00%
EPS	99,00%	100,00%	59,00%	62,00%	102,00%	171,00%	0,00%	73,00%
# Shares	2 649 000	2 660 000	2 660 000	2 653 000	2 650 000	2 659 000	2 658 000	2 658 000
Market Price	15,485	14,435	14,475	14,155	13,120	9,734	9,413	9,281
Dividend per share	60,00%	60,00%	65,00%	70,00%	50,00%	90,00%	70,00%	70,00%
Payout ratio	60,61%	60,00%	110,17%	112,90%	49,02%	52,63%	0,00%	95,89%
BV	3,34	3,48	4,16	7,52	8,14	7,05	6,78	5,66
PER	15,64	14,44	24,53	22,83	12,86	5,69	0,00	12,71
MBV	4,64	4,15	3,48	1,88	1,61	1,38	1,39	1,64
EV	41 049 791	38 430 310	38 538 120	37 588 598	34 812 265	25 923 070	25 060 411	24 713 638
EV/EBITDA	3 542	3 171	3 143	3 135	2 428	1 819	1 750	1 719

Margins								
EBITDA Margin	28,81%	29,62%	30,01%	28,97%	33,94%	33,71%	33,68%	33,07%
EBIT Margin	12,74%	13,18%	13,26%	11,94%	14,09%	13,56%	13,56%	13,41%
Net Margin	6,59%	7,17%	4,51%	4,72%	7,11%	11,41%	0,55%	4,93%

Profitability on Investment								
ROE	8,58%	9,56%	5,95%	6,37%	9,47%	14,02%	0,72%	6,75%
Net ROA	2,90%	3,10%	1,93%	2,02%	2,81%	4,48%	0,21%	1,96%
Operating ROA	5,61%	5,69%	5,68%	5,12%	5,58%	5,32%	5,33%	5,32%
Interest rate	0,61%	0,03%	0,00%	0,05%	0,02%	0,08%	0,22%	0,27%
Tax rate	20,54%	48,99%	34,35%	37,76%	30,99%	-20,16%	55,32%	32,59%
Net Operating ROA	4,45%	2,90%	3,73%	3,18%	3,85%	6,39%	2,38%	3,58%
Net Interest rate	0,48%	0,02%	0,00%	0,03%	0,01%	0,10%	0,10%	0,19%
Spread	3,97%	2,89%	3,73%	3,15%	3,83%	6,29%	2,29%	3,40%
Leverage effect on ROE	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive
Debt-equity Ratio	104,53%	121,35%	120,30%	125,51%	152,20%	133,04%	143,99%	151,26%
Net Debt-equity Ratio	97,15%	108,22%	111,77%	115,37%	139,53%	117,35%	125,71%	140,76%

Source: Own Calculations

Appendix 9: Orange ´s Countries Equity Risk Premium and Default Spread

Country	Total Equity Risk Premium (2022)	Rating-based Default Spread(2022)
Belgium	5,91%	0,64%
Botwana	6,82%	1,28%
Burkina Faso	16,38%	8,02%
Camerron	13,35%	5,88%
Congo	14,86%	6,95%
Côte Divoire	10,46%	3,85%
Egypt	14,86%	6,95%
France	5,75%	0,53%
Jordan	11,83%	4,82%
Kenya	14,86%	6,95%
Luxembourg	5,00%	0,00%
Mali	18,66%	9,63%
Moldova	14,86%	6,95%
Morocco	8,80%	2,68%
Niger	14,86%	6,95%
Poland	6,28%	0,91%
Romania	8,33%	2,35%
Senegal	10,46%	3,85%
Slovakia	6,28%	0,91%
Spain	7,43%	1,71%
Tunisia	18,66%	9,63%
Guinea	18,66%	13,66%
Guinea-Bissau	13,35%	8,35%
Liberia	20,18%	15,18%
Madagascar	14,86%	9,86%
Sierra Leone	23,21%	18,21%
Average		
France	5,75%	0,53%
Spain	7,43%	1,71%
Europe	7,78%	1,96%
Africa and Middle East	14,73%	7,93%

Source: Aswat Damodaran ´s Website/ Databases and Own Calculations

Appendix 10: The buildup to FCFF

Free Cash flow statement	Year2017	Year2018	Year2019	Year2020	Year2021	Year2022	Year2023F	Year2024F	Year2025F	Year2026F	Year2027F
NOPAT	3 556	3 076	4 107	6 885	2 575	3 930	3 849	3 892	3 939	3 989	4 044
Depreciation and amortisation	6 846	7 047	8 385	8 518	8 555	8 542	8 784	8 883	8 989	9 105	9 231
Working Capital	-7 320	-8 405	-2 780	-3 200	-1 442	-2 420	-3 622	-4 588	-5 557	-6 530	-7 505
Changes in working capital	-1 265	-1 085	5 625	-420	1 758	-978	-1 202	-966	-969	-973	-975
PPE	26 665	27 693	35 123	36 084	38 186	39 576	41 182	42 854	44 594	46 404	48 287
Changes in PPE	753	1 028	7 430	961	2 102	1 390	1 606	1 672	1 739	1 810	1 884
Capital Expenditures	7 599	8 075	15 815	9 479	10 657	9 932	10 391	10 554	10 729	10 915	11 114
Free Cash flows to Firm (FCFF)	4 068	3 133	-8 948	6 344	-1 285	3 518	3 444	3 186	3 169	3 152	3 136
Free Cash Flow to Equity (FCFE)	2 355	2 011	-10 051	4 281	-3 628	1 733	2 231	1 959	1 927	1 894	1 860

Source: Own Calculations

Appendix 11: Terminal Value

Value of Firm	76 793 €
Terminal Value Discounted	65 623 €
Terminal Value without Discount	80 236 €

Source: Own Calculations

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